Research Report 1977

Transforming Warrant Officer Career College Instructor Assessment for the Army Learning Model

Marisa Miller Nihill
U.S. Army Research Institute

Gary M. Stallings
Northrop Grumman Corporation

September 2014

**United States Army Research Institute
for the Behavioral and Social Sciences**

**U.S. Army Research Institute
for the Behavioral and Social Sciences**

**Department of the Army
Deputy Chief of Staff, G1**

Authorized and approved for distribution:

**MICHELLE SAMS, Ph.D.
Director**

REPORT DOCUMENTATION PAGE

1. REPORT DATE (dd-mm-yy) September 2014	2. REPORT TYPE Final	3. DATES COVERED (from. . . to) December 2011 to June 2013

4. TITLE AND SUBTITLE Transforming Warrant Officer Career College Instructor Assessment for the Army Learning Model	5a. CONTRACT OR GRANT NUMBER W5J9CQ-11-D-0001
	5b. PROGRAM ELEMENT NUMBER 633007

6. AUTHOR(S) Marisa L. Miller Nihill; Gary M. Stallings	5c. PROJECT NUMBER A792
	5d. TASK NUMBER 364
	5e. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U. S. Army Research Institute 　　　for the Behavioral & Social Sciences 6000 6th Street (Building 1464 / Mail Stop 5610) Fort Belvoir, VA 22602-5610	8. PERFORMING ORGANIZATION REPORT NUMBER Research Report 1977

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U. S. Army Research Institute 　　　for the Behavioral & Social Sciences 6000 6th Street (Building 1464 / Mail Stop 5610) Fort Belvoir, VA 22602-5610	10. MONITOR ACRONYM ARI
	11. MONITOR REPORT NUMBER Research Report 1977

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited.

13. SUPPLEMENTARY NOTES
Contracting Officer's Representative and Subject Matter POC: Dr. William R. Bickley

14. ABSTRACT *(Maximum 200 words)*:
This research involved transforming classroom and end-of-course (EOC) instructor performance metrics at the U.S. Army Warrant Officer Career College (WOCC) to reflect the Army Learning Model (ALM)'s emphasis on adult pedagogical approaches. An instructor guide was also developed to help instructors capitalize on the feedback provided by the metrics in order to enhance their ALM prescribed skills. The Academic Instructor Assessment (AIA) was developed and utilized to assess instructors of three WOCC courses. Fellow instructors and lead personnel utilized the AIA to conduct instructor evaluations and completed follow-up questionnaires regarding the AIA's usability and relevance to assessing ALM criteria. The supplemental EOC questionnaire was also implemented with students in three classrooms. Both the AIA and the supplemental EOC were well received. Restrictions in the sample and completion rates limited the psychometric properties calculable, but the AIA and EOC show promise as an improvement to assess ALM properties. The AIA and EOC were revised to reflect personnel feedback. The AIA, EOC, and Instructor Guide were delivered and briefed to the WOCC lead personnel and Commandant. The AIA and EOC were preliminarily incorporated into the WOCC instructor evaluation process and the Instructor Guide was immediately incorporated into WOCC instructor preparation and training.

15. SUBJECT TERMS
　　Training, Tailored Training, Adaptive Training, Army Learning Model, Army Learning Concept

SECURITY CLASSIFICATION OF			19. LIMITATION OF ABSTRACT	20. NUMBER OF PAGES	21. RESPONSIBLE PERSON
16. REPORT Unclassified	17. ABSTRACT Unclassified	18. THIS PAGE Unclassified	Unlimited Unclassified	179	Cindy Underwood 254-288-1248

Research Report 1977

Transforming Warrant Officer Career College Instructor Assessment for the Army Learning Model

Marisa Miller Nihill
U.S. Army Research Institute

Gary M. Stallings
Northrop Grumman Corporation

Fort Benning Research Unit
Scott E. Graham, Chief

September 2014

TRANSFORMING WARRANT OFFICER CAREER COLLEGE INSTRUCTOR
ASSESSMENT FOR THE ARMY LEARNING MODEL

EXECUTIVE SUMMARY
_____

Research Requirement:

This research involved the transformation of classroom and end-of-course instructor
performance metrics at the U.S. Army Warrant Officer Career College (WOCC) in order to align
with the constructs detailed in the Army Learning Model (ALM). Army regulations, such as
TRADOC Regulation 350-70 (2011b), provide guidance and direction in the assessment and
certification of Army instructors and associated staff and faculty at the various TRADOC
installations. This guidance and direction provides a base for assessment and is grounded in the
Staff and Faculty Development Program (SFDP). While current WOCC end-of-course and
instructor assessments align with these regulations, Army leadership realized a need to validate,
and update if necessary, the metrics in WOCC instructor assessment process to align with the
requirements of ALM. As a consequence of the ALM approach to training, certification and
assessment metrics used to rate instructors must be appropriately revised to support instructor
development and assessment in the facilitative adult learning environment.

Procedure:

An initial assessment was conducted to determine the degree to which existing classroom
and end-of-course instructor assessments captured characteristics of the adult learning concepts
as outlined in the ALM training/education model. A review was conducted of the current
metrics used to assess instructors at the Army's Warrant Officer Staff Course (WOSC) and
Warrant Officer Senior Staff Course (WOSSC) at the WOCC, Ft. Rucker, AL. Following that
analysis, proposed updated classroom and end-of-course assessments were developed with
metrics that address gaps in measuring ALM adult learning concept characteristics. An
instructor guide was also developed to help instructors capitalize on the feedback provided by the
metrics in order to enhance their facilitation skills within the ALM framework.

Peer and lead instructors and WOCC lead administrative personnel evaluated the
Academic Instructor Assessment (AIA) while observing instructors of three WOCC courses.
They utilized the AIA to conduct instructor evaluations and completed follow-up questionnaires
regarding the AIA's usability and relevance to assessing ALM criteria. The supplemental End of
Course (EOC) questionnaire was completed by students in three classrooms at the end of each
course. WOCC personnel also answered questions regarding the EOC's viability as an EOC
questionnaire to assess ALM criteria.

Findings:

Both the AIA and the supplemental EOC were well received. Restrictions in the sample
and completion rates limited the psychometric properties calculable, but the AIA and EOC show
promise as an improved scale to assess ALM properties as reported by instructors and evaluation
personnel. The AIA and EOC were revised to reflect personnel feedback.

Utilization and Dissemination of Findings:

       The AIA, EOC, and Instructor guide were delivered and briefed to the WOCC lead personnel and Commandant on May 13, 2013. The AIA and EOC were preliminarily incorporated into the WOCC instructor evaluation process and the Instructor Guide was immediately incorporated into WOCC instructor preparation and training.

TRANSFORMING WARRANT OFFICER CAREER COLLEGE INSTRUCTOR
ASSESSMENT FOR THE ARMY LEARNING MODEL

CONTENTS

TRANSFORMING WARRANT OFFICER CAREER COLLEGE INSTRUCTOR ASSESSMENT FOR THE ARMY LEARNING MODEL

Introduction

In 2011, the United States (US) Army Training and Doctrine Command (TRADOC) produced the *Army Learning Concept for 2015* (ALC 2015) (TRADOC, 2011a). Later renamed as the *Army Learning Model* (ALM), this concept prescribes a shift in the Army's classroom training model from a "sage-on-the-stage" instructor-centric delivery of learning material to a "guide-on-the-side" model wherein instructors facilitate student-led learning, problem solving, and discussion. The shift in the learning concepts described in ALM are closely aligned with adult learning theory concepts currently exercised in many schools, businesses, and other professions outside the Army.

Army Training and Learning Transformation

ALM describes a learner-centric, technology-enabled learning environment that reflects an understanding of the preferences of digital age learners for relevance, feedback, and collaboration. Some characteristics of this future learning environment include blended learning, adaptive learning, peer-based learning, Soldier created content, virtual training environments, and content-based facilitated problem solving team exercises. One of the key themes of the document is to increase "the rigor, relevance, and effectiveness of face-to-face learning experiences in schoolhouses through instructional strategies that maximize the effectiveness of limited resident learning time" (TRADOC, 2011a, p. ii). ALM prescribes that in the years prior to 2015 the focus of Army instruction will move from being instructor-centric toward being learner-centric. Within this move, the function of the instructor is to move from that of transmitting knowledge to learners to that of facilitating learners' acquisition of knowledge. Therefore, Army instructional practices in the schoolhouses must become more responsive to individual student need, better attuned to operational requirements, and more representative of social learning contexts (TRADOC, 2011a). Institutional courses must implement training strategies that maximize the training that can be conducted in the available time, without compromising standards and without reducing skill retention.

ALM states that there are some continuous adaptive learning model instructional guidelines that are common across all levels of Army instruction (initial entry, midgrade, intermediate, strategic) and should be applied as is appropriate to the learning content and audience. It provides the following list of overarching instructional guidelines applicable to all cohorts and echelons for instructors throughout the Army (TRADOC, 2011a):

- "Convert most classroom experiences into collaborative problem solving events led by facilitators (vice instructors) who engage learners to think and understand the relevance and context of what they learn.
- "Tailor learning to the individual learner's experience and competence level based on the results of a pretest and/or assessment.

- "Dramatically reduce or eliminate instructor-led slide presentation lectures and begin using a blended learning approach that incorporates virtual and constructive simulations, gaming technology, or other technology-delivered instruction.
- "Use 21st century Soldier competencies as an integral part of all learning activity outcomes; establish metrics and standards for each competency by cohort and echelon.
- "Examine all courses to identify learning content that can be transformed into performance support applications, develop applications, and introduce application use in the schoolhouse.
- "Develop technology-delivered instruction incorporating adaptive learning and intelligent tutors with a goal of reducing learning time while maintaining effectiveness for resident and nonresident use.
- "Integrate digital literacy skills appropriate at each career level and foster skills to enable and encourage a career-long learning mindset.
- "Use virtual and game-based training to add realism and operational relevance at all levels.
- "Integrate joint, interagency, intergovernmental, and multinational, cultural, and comprehensive fitness goals into all courses at the level and degree that fits the learning audience.
- "Establish a full spectrum frame of mind in all learners, while maintaining flexibility to adapt learning content to meet operational demands" (p. 25).

ALM prescribes a list of the most important 21st century Soldier competencies that must be instilled during Soldiers' initial military training and reinforced throughout their career. ALM describes the 21st Century Soldier Competencies (TRADOC, 2011a, p. 41- 43) as:

- Character and accountability – demonstration of Army values through action, acceptance of obligations of service before self, internalization of the Army Ethic.
- Comprehensive fitness – maintenance of individual and subordinate fitness to include physical, emotional, social, family, and spiritual.
- Adaptability and initiative – ability to operate in unexpected situations and to recognize when standard procedures are not an effective solution, use of innovation to develop new procedures.
- Lifelong learners (includes digital literacy) – continual assessment of themselves, identification of what they needs to learn and acquisition of identified knowledge, skills and attitudes.
- Teamwork and collaboration – creation of high-performing formal and informal groups through leading, motivating, and influencing individuals to work toward a common goal, effective team members.
- Communication and engagement (oral, written, negotiation) – clear and succinct expression in oral, written, and digital communications, building of effective relationships through interpersonal tact, influence, and communication.
- Critical thinking and problem solving – use of analysis and evaluation to solve complex problems, development of solutions using experiences, training, education, critical questioning, convergent, critical, and creative thinking, and collaboration.

- Cultural and joint, interagency, intergovernmental, and multinational competence – use of cultural fundamentals, self-awareness skills, and regional competence to act effectively.
- Tactical and technical competence (full spectrum capable) – employment of tactical and technical skills to accomplish the mission and support the commander's intent.

ALM doctrine states that advances in learning science, cognitive psychology, educational psychology, neuroscience, and other related fields provide new insights into improved learning strategies and applications of technology to learning. However, years of research show there is still no single learning strategy that provides the most effective solution to every learning problem. Decisions regarding instructional strategies and media selection must be made by experts based on the audience, the level of experience the learner brings, and the content of the learning. According to ALM, well established research findings have identified some of the most important learning principles that should be included in the design of Army learning products (TRADOC, 2011a). ALM describes these principles as including the following main ideas:

- "Adult learning is promoted when the learner's prior knowledge is activated prior to learning new knowledge" (p. 14).
- "Well designed learning must incorporate deliberate strategies to ensure learning transfers from the learning environment to the operational environment" (p.14).
- "Learner characteristics that influence transfer of learning to the operational environment include cognitive ability, self-efficacy, and motivation" (p. 14).
- "Some learner characteristics are malleable and enhanced through specific learning strategies such as mastery experiences and supportive feedback" (p.14).
- Storytelling, "virtual scenarios, videos, and other media provide great opportunities to incorporate high impact stories into learning events" (p.14).

The ALM shift in direction in classroom training is generalized by transforming from a lecture-based instructor-delivered method of information transfer to that of a learning environment where instructors facilitate student learning through collaborative problem solving and discussion techniques. As Army institutional training makes the transition to this facilitative training model, the concepts as described by ALM need to be fully examined in order to determine how specific skills, characteristics and instructional methods required by successful instructors in this environment can be incorporated into the learning environment.

When adopting a new instructional approach, training materials must be updated and instructors must learn to effectively implement the new approach. While the subject matter content of classes might remain relatively constant, the supplemental skills, tools, and materials necessary to conduct training using this approach must be developed. Likewise, instructors will need time and assistance to modify these training materials, learn new instructional techniques, and develop the instructional approach in order to incorporate the "guide-on-the-side" model. The new instructor-as-facilitator must be able to tailor student interactions to specific learners' immediate needs rather than to deliver standardized one-size-fits-all training to all learners in a course.

The concept of shifting to an instructor-facilitated learning environment, as described in ALM, mirrors principles described in the public sector as adult learning theories or concepts. ALM, however, falls short of describing many of the associated concepts of adult learning and even more importantly, how to implement ALM or adult learning concepts in the Army classroom. Moreover, in order to ensure consistent standards of ALM instruction are being met, a means to measure instructor performance against these principles is necessary. In order to develop metrics that evaluate an instructor's performance in relation to these concepts, an in-depth look at how these concepts are applied in an adult learning environment is necessary. With the absence of implementation details in ALM and other regulations, the information is best derived from the volumes of literature on adult learning concepts from the public sector.

Adult Learning Theory and Concepts

Adult learning theory is not a new concept. In the 1920s, John Dewey, an American philosopher, psychologist, and educator developed a laboratory school for the Department of Education at the University of Chicago in which he created an active learning environment for the students. His educational philosophy spurred a reformation in the field of education. Many of the concepts in what is now known as adult learning theory draw from his ideas (Tweedell, n.d.). Numerous educators have used his theories of experiential learning and developmental psychology to design educational models that meet the needs and demands of adult learners. Dewey believed education must engage with and build upon a student's existing knowledge and experience. He advocated teaching methods that involved thinking, reflection, exploration. Dewey believed that interaction with the environment should be an integral part of the learning framework and experience (Davendorf, 2003).

As the field of adult learning grew, more specific and detailed knowledge was developed. An analysis of both civilian and military academic research material reveals specific methods instructors may use in the classroom to implement ALM adult learning concepts within military courses. While numerous books, papers, and articles have been written on topics associated with adult learning theory and concepts (cf. Childs, Schaab, & Blankenbeckler, 2002; Jonassen, 1994, Merrill, 2002; Bransford, Brown, & Cocking, 2000; Caruso, 2010; Zemke& Zemke,1995; Lacefield,1999), major concepts continually emerge, many of which reflect ALM. A sampling of adult learning theory methods and actions are provided below.

- **Discovery Learning.** Implement the adult learning concept that places responsibility for learning on the student and encourages self-learning. Transfer of responsibility of learning shifts from the instructor to the student and learning is achieved by discovery rather than by using the instructor as the delivery instrument for information. Transparency of this concept and of specific learning objectives is maintained in order not to inhibit the learning by discovery process.
- **Collaborative Problem Solving.** Develop team collaboration in problem definition and problem solving. Collaborative problem solving events are reflected in practical exercises and other learning exercises. Students learn from/with other students.
- **Blended Learning.** Drastically reducing lectures and using "blended learning" approaches with a variety of concept and information delivery methods, such as

computers, mobile devices, etc. Develop an environment that actively engages the learner in acquiring the specified competencies.

- **Critical Thinking.** Practical exercises and examples are designed to create conditions with contradictions and alternative solutions that promote critical thinking, discussions, and problem solving skills within the students. Present complex and varied problems that make Soldiers think about what they are doing and why.
- **Real World Application.** Strengthen the connection between the training and its application in the Soldier's unit and improve motivation by placing training in a real-world context. Learning activities and practical exercises are linked to real world situations and tied to job application. Demonstrations of new knowledge are provided in context to show students applicability and "what right looks like."
- **Knowledge Transfer.** Increase adaptability in transferring training to new situations. Practical exercises are designed to apply/transfer knowledge gained in the classroom to new problems and situations. Allow the learners to apply their new knowledge in pieces while withdrawing instructor support until students can completely apply it on their own. Allow the learners to integrate and apply their new knowledge in a manner that is as similar as possible to the manner they will use the knowledge in their jobs and duties.
- **Activation of Prior Knowledge.** Activate the student's prior knowledge as a foundation to new learning. Tailor the learning experience based on pre-tests and assessments of the learners. Instructors establish a base of current student knowledge and build off of that.
- **Effective Questioning.** Use effective questioning techniques where instructors do not simply answer a question, but rather, effectively turn the question back to the student(s) to discuss and discover on their own. The instructor becomes the "guide on the side" as opposed to the "sage on the stage." Coach by listening, identifying weak links in comprehension, and asking questions that allow the Soldiers to think through the situation rather than just receive an answer. Encourage Soldiers to think about why they are responding in a given way, to try new solution sets, to assess their effectiveness, and to share learning outcomes with their peers and the instructor.
- **Use of Technology.** Incorporate the use of technology in the classroom and extensively use methodologies that produce the highest retention rate for concepts and information.
- **Learning Environment.** Create a positive, supportive, encouraging environment for students to learn. Foster respect and rapport in the instructor-student relationship and the student-student relationship. Encourage student communication and collaboration in learning.

The idea behind adult learning is to create an environment where the students feel engaged and actively participate in the learning process rather than simply being on the receiving end of a stream of new knowledge presented by an instructor. Instructors become coaches that assist in the learning process rather than spokesmen that deliver content on a particular subject that students are supposed to passively absorb. Adult learning environments allow students opportunities to discover the knowledge for themselves through effective teaching methods. Using these types of methods, students are thought to be more motivated and involved in the acquisition of new knowledge and presumably able to retain more knowledge for a longer period of time over traditional methods. These approaches further increase students' ability to transfer new knowledge and concepts to other situations, in the process promoting adaptive reasoning and initiative as the learner determines how to apply learned information to new situations. A

learning environment that allows for collaboration between students also promotes teamwork and encourages learning between peers.

Merrill (2002) reviewed many instructional design theories in an attempt to identify prescriptive principles that are common throughout the various adult learning theories. Merrill identified the following five general principles that apply to effective learning (Merrill, 2002). Learning is promoted when:

- Learners are engaged in solving real-world problems.
- Existing knowledge is activated as a foundation for new knowledge.
- New knowledge is demonstrated to the learner.
- New knowledge is applied by the learner.
- New knowledge is integrated into the learner's world.

Many schools and education programs throughout industry and the public sector integrate these and other adult learning theories in their instructional methodologies instruction. As instructional approaches change, instructional assessments must also change. Assessing how well instructors integrate adult learning concepts into their instructional methods can be accomplished through various means. The metrics used in classroom assessments and end-of-course assessments can assist in this determination.

Assessments

Measuring Army instructor performance can be closely paralleled to methodologies used to measure and compute teacher performance in the public sector. Some research encourages measuring teacher performance through the use of multidimensional metrics (King, Ambrose, Arreola, & Watson, 2009) that draw upon different components to evaluate the content, organization, and delivery of course material and the assessment of student learning. Measuring an instructor's performance involves determining not only how performance-related information should be gathered, compiled, analyzed, and used, but also determining what aspects of instructor performance are important.

It follows that effective teaching involves multiple components. Instructors must interact with students in a way that (1) provides opportunities for them to learn, (2) creates conditions that support and facilitate learning, and (3) uses techniques and methods that create an environment with a high probability that students will learn (King et al., 2009). According to King, the five basic skills necessary for effective teaching include content expertise, instructional design skills, instructional delivery skills, instructional assessment skills, and course management skills (see also Bransford et al., 1999). A performance rubric described in King's report measured these five basic skills for teaching against sources of measurement from students, peers, Department chair / supervisor, and self (King et al., 2009). King's report states that when the total "act" of teaching is defined in terms of these five broad components, it becomes clear that the evaluation of teaching cannot be accomplished by using a single measurement tool. It further states that a comprehensive evaluation should not be simply based on the judgment of a few classroom observations by an observer and that no one person or group has a detailed, complete view of the entire teaching process. King concludes that a more

accurate and more valid assessment of teaching performance involves gathering information on all five dimensions of teaching performance from a number of sources. These sources may include self evaluation, students' perceptions, information from peers and experts, and feedback from department heads or supervisors.

Berk (2005) proposed that a unified conceptualization of teaching effectiveness is to use multiple sources of evidence, such as student ratings, peer ratings, and instructor self-assessment, to provide an accurate and reliable base for formative and summative decisions. This triangulation of sources is recommended in view of the complexity of measuring the act of teaching and the variety of direct and indirect sources and tools used to produce the evidence and assessment. The basic premise of triangulation of sources is that by drawing on three or more different sources of evidence, the strengths of each source can compensate for weaknesses of the other sources, thereby converging on a portrayal of teaching effectiveness that is accurate and fair (Berk, 2005). Likewise, the multiple sources used to assess teachers in the public sector are also applicable for instructors at the WOCC and serve as a basis for a system of metrics.

WOCC Current Practices

The preponderance of Army institutional training has traditionally been conducted using the lecture, guided demonstration, and crawl-walk-run approach. Students are told the training objectives for a class, the trainer presents a block of instruction, students practice applying the material they just learned, and then an assessment is made of student progress. In most courses, these assessments occur at the end of a block of training (or specific subject within a course) or toward the end of the total course. Most Army trainers are experienced in this training approach, as they have used it for many years, and it is common in civilian education. In their experience as trainers in units and institutions, this standard approach is their primary model. The Army knows the effectiveness of this approach, and few have experience with any other model or approach to training.

Currently the WOCC has procedures for conducting classroom assessments by an appointed observer using a standard evaluation checklist and an end-of-course assessment from a student perspective obtained through an end-of-course questionnaire. The procedures for implementation include Course Management Plans (CMPs), Student Assessment Worksheets, and Academic Instructor Evaluation Checklists. The Warrant Officer Staff Course (WOSC) and Warrant Officer Senior Staff Course (WOSSC) CMPs were designed for use by the Total Army Schools System (TASS) and applicable at the WOCC and include, among other items, guidelines for assessing instructor performance.

Although the CMP describes various aspects of course management, such as course mapping, training sequences, staff and faculty responsibilities, and student guidance, it does not contain a task assignment to maintain and update classroom and end-of-course metrics aligned to ALM concepts. However, the CMP does direct that the Department Head/Senior Instructor must evaluate and counsel instructors in their performance (WOCC, 2011). The U.S. Army Aviation Warfighter Center at Fort Rucker, AL, currently uses USAAWC (G-3) Form 1152a-R (2007), the Academic Instructor Evaluation Checklist, to evaluate instructors. See Appendix A. This form is a checklist comprising instructor actions of classroom preparation, introduction,

presentation, summary and timing. The grading options consist of "Go," "No Go," "NE" (Not Evaluated), and "NA" (Not Applicable). The actions listed within the major categories are applicable to standards set in an older version of TRADOC Regulation 350-70 (TRADOC, 2011b) and do not include core principles required in ALM. In addition to an overall summary section, this form assesses four general areas: classroom preparation (mainly regarding the physical environment), introduction (regarding general orientation for the day's block of instruction), presentation (regarding the manner in which instructional material is delivered), and timing (e.g., time management). The end-of-course assessments completed by students are comprised of surveys that elicit either a "Yes" or "No" or an "Always," "Usually," "Sometimes," "Seldom," or "Never" response followed by optional written, open-ended responses. Eleven general areas are surveyed on the end-of-course critique, ranging from clarity of course objectives to the effectiveness of leadership development with additional space for other written responses. Survey questions center on overall course administration and the mentoring and motivating of students by instructors.

Instructor certification is part of the WOCC's required tasks for the Warrant Officer Education programs. The components of the certification follow mandates in TRADOC regulations, such as undergoing Staff and Faculty Common Training (SFCT) courses conducted through the USAACE Staff and Faculty Development Branch (SFDB). WOCC instructor certification requires that the supervisor will conduct instructor orientation with each individual instructor within two weeks of the instructor's report date and discuss the instructor's Individual Development Plan (IDP). The supervisor ensures that the newly assigned instructors participate in the WOCC New Employee Orientation Program within one month of the new instructor's report date. The elements of the Orientation Program are listed on the Instructor Certification Checklist (Enclosure 2A of the SOP) to track certification progress.

Subsequently, WOCC instructors must complete three phases of requirements to become certified. The instructors use the Instructor Certification Checklist to document their progress through the certification process. The three phases consist of:

- Phase 1: Training, shadowing, and peer panel evaluation.
- Phase 2: Instructor skills performance in front of a Proponent Certification Board.
- Phase 3: Evaluation of classroom instruction with students present in a normal classroom by a mixed panel of staff and cadre (Directorate of Education and Training representative, academic chief, senior mentor, content expert, WOCC quality assurance member).

Despite a multi-phase certification process, the WOCC instructor orientation and certification procedures currently do not contain any formal process or training for instructors on ALM adult learning concepts.

Method

This effort addressed three major topics: the metrics used for assessing instructors during classroom instructional periods, the metrics used for end-of-course assessments, and a guide to

be used by instructors to aid in interpreting the results of assessments. All other efforts related to this project can be associated with these three topics. In general terms the process was, first, to determine the Army's guidelines regarding the shift toward adult learning principles as described in ALM; second, to understand the current practices at the WOCC relating to instructor assessments; third, to assess how well the WOCC current practices aligned with ALM guidelines; fourth, to develop metrics for assessments, if needed, that cover ALM concepts; and fifth, develop a guide for instructors to assist in understanding how the assessments work and the ratings received from them.

Adult Learning Concepts

The research team conducted a review of available, related literature from both the government and civilian sector. The review included a look at ALM in order to grasp the concepts involved in the shift to alternative methods of instruction in the classroom. ALM, being general in concept and less specific in implementation details, required a more in depth look at the principles contained within to gain insight on how those principles might be applied and assessed. ALM describes overarching concepts that can apply to the classroom in three ways: in the instructional guidelines, in the 21st Century Soldier Competencies, and in the description of learning science. The research team further examined these concepts within available civilian literature to clarify each individual concept or theory. That review led to a more complete understanding of each concept. Once the research team completed the review, a combined, more detailed list of adult learning concepts was created. The list included all adult learning concepts deemed to be relevant to this effort, which allowed for the eventual review of existing WOCC assessment metrics in comparison to these adult learning concepts and subsequent development of new metrics. It served as a basis to develop assessment metrics and subsequently as a primary instrument in the crosswalk conducted between the current WOCC Academic Instructor Evaluation Checklist and the proposed replacement form.

Information Gaps

The research team conducted a complete review of material provided by the WOCC to include the current WOCC Academic Instructor Evaluation Checklist used for periodic instructor assessment, the questions provided used in end-of-course assessments completed by students, the Student Assessment Plan used to assess a student's behaviors during the course, the WOCC Instructor Certification instructions, the WOCC Instructor Certification Checklist, documents related to course content, and the WOCC Course Management Plan. The review identified gaps in the information needed to completely assess the instructor assessment practices at the WOCC. After the review, the research team determined that face-to-face interview sessions with WOCC personnel would facilitate the acquisition of missing information.

The team developed interview questions to address specific areas related to assessment of instructors at the WOCC. This document (Appendix B) contained two sections. The first section included questions for the WOCC command group and the second section included questions for academic instructors/facilitators. These questions served as the basis for discussions with all WOCC personnel interviewed and prompted discussions regarding the personnel's understanding of ALM, their current practices, and suggestions/strategies they would

like to see implemented in instructor assessment. Additionally, the team developed a limited number of sample metrics to demonstrate an indication of proposed format, organization, rating scale, and content concepts being considered. Interview personnel used the examples in follow-on discussions subsequent to the interview process.

The interview focused on an initial understanding of current assessment practices at the WOCC and a subsequent sensing session helped to determine WOCC goals relating to instructor assessments and ALM directives. WOCC personnel, including WOSC and WOSSC instructors and assorted primary administrative personnel, participated in a total of six interviews/discussions,. Each interview session consisted of two research personnel with one to five interview participants. The sessions lasted approximately 60 to 90 minutes each.

During these sessions, the research team also presented WOCC personnel examples of draft assessment metrics that included ALM concepts and WOCC personnel provided comments as to whether the concepts being considered would assist in meeting the desired goals for the WOCC. The intent was to determine if (1) the draft metric examples addressed elements WOCC academic personnel deemed necessary and appropriate, (2) the WOCC academic personnel felt the format and rating scale of the form properly addressed the sample competencies, and (3) the data derived from the form would be deemed useful information by the WOCC academic personnel.

Instructor Assessments

The prevailing thoughts throughout the educational field are that multiple methods of assessments of teachers or instructors are necessary to gain a proper assessment. The reasoning states that the use of only one type of assessment may not give an accurate picture of an instructor's performance. Each type of assessment has unique strengths and weaknesses, and theories state that combining multiple methods will combine the strengths of all giving a clearer understanding of performance. Examples of methods used for assessments of teachers/instructors include:

- End-of-course assessments;
- Value added models of instructor performance through student assessments (models that statistically control other variables and influences on student performance in attempts to isolate the impact that instructors alone have on student performance, thereby reflecting instructor ability);
- Focus group interviews and student surveys;
- In class observations by peers, academic supervisors, and other faculty members;
- Student reports; and
- Self assessment.

While multiple methods of instructor performance are something to be considered for the WOCC, this project is primarily focused on metrics used in classroom observations and students' end-of-course assessments.

Academic Instructor Assessment

Subsequent to the review of the WOCC Academic Instructor Evaluation Checklist, the research team conducted an initial comparison of the checklist's metrics against ALM guidelines. We determined that instructor use of adult learning concepts during classroom training was largely not assessed by the extant instructor evaluation. Current assessment criteria generally appeared to be geared toward the traditional lecture based approach to classroom instruction. Updating the metrics in the assessment form was necessary to properly evaluate instructor classroom performance against ALM guidelines.

The teaching methodologies described in ALM are not related to any particular type of instructional content but, instead, generically apply across the spectrum of course content for a myriad of subject areas. As such, it appeared appropriate to draft metrics that would cover ALM classroom instruction guidelines without a direct connection to any specific content in WOCC courses. Therefore, the developed metrics would not necessarily be applicable only to the Warrant Officer instructors, but also to other instructors within and outside the Army.

The initial draft of the Academic Instructor Assessment (AIA), the form proposed to replace the current WOCC rating form, began with a review of all available material including the WOCC Academic Instructor Evaluation Checklist, ALM guidelines, and instructional characteristics from assessments used in the public sector that include adult learning theory concepts. The construction of the assessment form centered on three main elements: specific instructional characteristics/competencies, rating scale (markers of performance levels), and assessment format. The team conducted an examination of what the WOCC was currently using against other available material as shown in Table 1.

Table 1.
Comparison of instructor assessment elements in regards to adult learning concepts

	WOCC	ALM	Public Sector
Instructional competencies	X	X	X
Rating Scale	X		X
Format	X		X

Instructional Competencies. The construction of the AIA began by compiling the instructional characteristics that should be assessed. ALM and public sector adult learning concept ideas and the current WOCC Instructor Evaluation Checklist served as base sources for developing the metrics for the AIA. During development, researchers considered concepts or areas of performance that applied to adult learning theories as well as those necessary for assessment but that did not specifically apply to adult learning concepts. We made an attempt to include all necessary characteristics for a comprehensive assessment of an instructor's performance during classroom instruction. To do so, the research team developed and conducted a crosswalk between the draft assessment measure, ALM, adult learning concepts, and the WOCC Academic Instructor Evaluation Checklist. The results of that crosswalk are provided in Appendix C. The team used the crosswalk with the WOCC Academic Instructor Evaluation

11

Checklist primarily to ensure coverage of all applicable metrics in the current assessment form into the proposed form either directly or within a combined competency referring to similar behaviors/characteristics. Some competencies combined, included, or excluded metrics from the WOCC assessment form on the proposed form by considering a number of factors including similarity of observations, necessity, and adult learning concepts.

The crosswalk with ALM and adult learning concepts ensured adequate incorporation of appropriate principles into the proposed assessment. As shown in the results of the crosswalk, this made it easy to see gaps in current WOCC assessments where adult learning concepts were not addressed. It should also be noted that since individual proposed characteristics may cover many different aspects of a particular competency, an entry in the crosswalk blocks do not in turn mean that a particular entry completely addresses that particular competency. For example, a characteristic in the current WOCC assessment form may be covered by the "Collaborative Learning" competency on the proposed form. However, that does not indicate that the metric on the WOCC form completely covered or grasped the main concept for collaborative learning. The team used the crosswalk to show competency coverage. An association of the paragraph numbers with the written content is necessary to assess how well that concept is covered.

Rating Scale. The challenges in determining the rating scale for each instructional competency involved the scale size and the scale descriptions themselves. First, a scale had to be determined that allowed for enough distinction between ratings in order to properly assess an instructor's performance and also one that was not so large as to confuse the evaluator and make it difficult to distinguish between ratings. The rating also had to be quantifiable; meaningful data must be derived in order for it to be useful. Secondly, the team needed to determine a format for descriptive measures of the rubrics themselves that would assist the evaluator in selecting a rating and also be easily identifiable and quantifiable. We compared multiple scale options against the intended use of the assessment and the data it would produce. Scales considered ranged from the 2-point "Go" and "No Go" currently used in WOCC assessments, to a 3-, 4-, and 5-point scale. Likewise, the team considered response scales that were both a number rating only, a description-only, behaviorally-anchored rating scale, and a combination of descriptions and numbers. The research team settled on a three point rating scale with a combination of descriptions and numbers. Each response was crafted to uniquely convey a high, medium, and low performance level.

Format. After determining the instructional characteristics/competencies and the type of rubrics, including the rating scale as well as other verbiage, the research team conducted an assessment of the form format. The main consideration in determining a format was to make the form clearly understandable to the user to include an instruction sheet, grouping the metrics by major category, metric descriptions, rubric descriptions, rating placement, and placement of additional comments if necessary whether required or desired.

AIA Form Development. After conducting a review of all material including the ALM guidelines, civilian adult learning theory, and the existing WOCC Instructor Evaluation Checklist, the research team determined an initial set of concepts. We then condensed those concepts, together with other areas applicable to instructor ratings, into metrics on a draft form in a column labeled "Competency." After review of multiple assessment examples throughout the

public sector, we grouped the characteristics into competency categories for clarity. We determined the main competency categories to be Planning and Preparation for Learning, Classroom Environment, Delivery of Instruction, and Assessment and Monitoring. A fifth group labeled Professional Responsibilities addressed items only to be rated by the instructor him/herself or by a faculty member having prior knowledge of those particular competencies relating to instructors both inside and outside the classroom.

The initial scale chosen for the form was a three point scale. The intent was to move from the current two point scale (Go, No-Go) to a three point scale (1 – Needs Major Improvement, 2 – Minor Issues, 3 – Very Well Done) to give more diversity and increase rater options. Initial thoughts were that satisfactory marks would be recorded as a 2 with a rating of 1 or 3 being below or above average respectively. Each scale point included a list of observable behaviors by classroom instructors to describe behavior that would justify the associated rating. These descriptions were designed to assist the observer/evaluator in understanding which behaviors in the classroom, present or not present, would suggest something about the instructors, their methods of instruction, or their approach to instruction in the classroom.

Subsequent to the development of the complete Draft AIA, the research team provided the document to senior WOCC personnel for review. The research team received comments from academic staff personnel on two separate occasions for both a first and second draft of the AIA. These comments were incorporated into the AIA and a third draft of the AIA was developed for use in validation (Appendix D).

End-of-Course Assessments

In addition to the classroom assessment used to rate an instructor's performance during a course, many learning environments, including the WOCC, use an end-of-course rating completed by students. These assessments often contain multiple questions about the instructor, course content, course administration, and other related topics. The current WOCC end-of-course assessment consists of eleven questions with additional room for written comments if desired.

End-of-course assessments are not to be confused with student assessments, which may also be presented near the end of a course of instruction. End-of-course assessments are completed by the students and evaluate topics related to the course as well as the instructor. Student assessments are measurements of a student's grasp and understanding of the course content. However, some institutions also use student assessments as one indicator of teacher/instructor effectiveness, better known as "Value Added" models. Theories for using these models suggest generally that the better the student performs, the more effective the instructor. Skeptics propose many issues with value added models to include unintentionally combining factors beyond teachers' control. In civilian schools, these uncontrollable factors may be parental involvement, student intelligence, etc. In the WOCC, these uncontrollable factors may be such factors as student MOS, deployment experiences, course composition of student ranks, etc. For this effort, the research team addressed end-of-course assessments and not those associated with student assessments.

After reviewing the existing WOCC end-of-course assessment, the team determined that it dealt more with overall course administration and mentoring of students rather than assessment of instructors or instruction. Therefore the research team suggested additional questions to address adult learning concepts use in the classroom. Keeping in mind that the students completing these assessments would be less familiar with learning concepts, special attention was paid to avoiding jargon in favor of language that accurately described concepts but was still comprehensible. These developed assessment questions were intended to accompany the existing end-of-course assessment, which assessed multiple instructors who shared instructional responsibilities for a single course. As such, these new ALM-focused items similarly assessed instruction broadly rather than any single instructor. In developing the items, the research team also intentionally excluded concepts that would be better assessed by observers rather than students (e.g. classroom setup, communication techniques, student mistakes, etc.).

Subsequent to an analysis of the existing WOCC EOC student questions, the team added eight questions to the eleven current questions in order to address adult learning concepts. The questions added were centered on major adult learning concepts but constructed to be easily understood by those students not familiar with adult learning theory or ALM. The scale and format used mirrored those used in the AIA. Validation included only the proposed additional questions (Appendix D).

Instructor Guide

The research team also developed an *Academic Instructor Assessment Guide* to accompany the AIA, with instructors as the intended audience. The guide is intended to be a companion reference to the Academic Instructor Assessment, with the intention of assisting instructors in identifying ways to continually improve their performance in the classroom. Although the guide was written with instructors as the primary users, others may also find the guide useful, such as raters conducting assessments, staff, and any other personnel requiring more information regarding the AIA.

The guide is designed as a resource document and, as such, is not intended to be read from beginning to end. Instead, users can reference specific sections of the guide, organized by AIA competency, for additional information on a particular topic as the need arises. The design allows an instructor wishing a deeper understanding of any concept to turn directly to that topic and read the discussion. Each section provides a brief general discussion of the concept, the key factors involved, and some suggested ways to improve performance in the classroom as it pertains to that particular topic. Readers needing further information on a particular topic can find additional content in the cited resources within each section.

Survey Participants

Survey participants were a mix of personnel including instructors, supervisors, and administrative personnel. Informed consent sessions were held prior to the start of the validation effort during which the purpose of the AIA and the validation effort were briefed to the personnel. After the briefing, personnel were asked to indicate whether they would like to participate in the validation effort either as an instructor who would be rated and complete a

self-assessment, an observer assessor to rate other instructors using the AIA, or if they would be willing to be both an observer assessor and an instructor assessed by others. Participants were, of course, also given the option to decline to participate entirely. Only personnel who were scheduled to teach a portion of the upcoming WOSC or WOSSC courses were eligible to serve as instructors in the validation effort. The resulting participant list included a total of 31 volunteer personnel willing to participate in the study; 16 participating as both instructor and assessor, 4 participating as instructor only, and 11 participating as assessor only. In addition, 17 student personnel participated in an end-of-course validation questionnaire.

Materials

AIA Validation Survey. Relevant academic personnel at the WOCC utilized the Draft AIA and the legacy/existing assessment form, the Academic Instructor Evaluation Checklist, USAAWC (G-3) Form 1152a-R (2007), to conduct instructor assessments. Participating assessment personnel conducted assessments on WOCC instructors using both forms, and instructors performed a self assessment using the Draft AIA. The team distributed applicable surveys to all personnel to capture individual opinions of each form independently. Survey questions included items pertaining to format, ease of use, organization, categorization, clarity, rating scale, and assessment topics. Survey questions sought information on the applicability of the assessment forms to rate instructor practices and teaching methods in the classroom and not the actual course material or course content.

EOC Validation Survey. A validation survey captured selected participants' opinions on the proposed questions developed for the student end-of-course assessment. The survey was a short questionnaire consisting of three basic questions with additional room for comments. The intent behind the questions was to validate that students could understand the phrasing and terms in the proposed questions and that the questions provided useful information about what they observed regarding instructor adult learning practices in their classes.

AIA and EOC Survey Packets. The research team developed and assembled survey packets with each one containing only the specific material needed for individual participants. Depending on the level of participation, packets may have included instructions for conducting self and instructor assessments, administrative data forms, current and Draft AIA assessment forms for all assessments, survey questions pertaining to the current and Draft AIA assessment forms, proposed EOC assessment questions, survey questions regarding the proposed EOC questions, and consent forms authorizing use of an assessment conducted for a required official quarterly instructor assessment (Appendix D).

Data Collection Methodology. All WOCC personnel participants attended a briefing describing the survey process timeline for completion of survey requirements. Participants had 6 weeks to conduct the assessments and complete all associated survey forms. ARI provided contact information to all participants for those having future questions or needing additional information. Participants received assembled survey packets with thorough instructions on how to complete their materials.

Instructors. Participants agreeing to participate as instructors were given a copy of the AIA and a copy of the AIA validation survey. Instructors were told to complete the AIA as a self-assessment after they had first been observed by an observer. Instructors were asked to complete the form on the same day as their first observation (some instructors were observed more than once). After completing their self-assessment using the AIA, instructors then completed an AIA validation survey.

Observers. Observer participants were asked to make three separate ratings of instructors. Given the small sample size, to increase compliance and completion rate, the researchers allowed the observers to conduct the three separate observations at their own convenience. However, in practice, several observers did not conduct all three observations. In addition, several instructors were observed more times than others. Range of observation frequency ranged from zero observations conducted by observers to three observations. Frequency of observations of instructors ranged from being observed a single time to being observed nine times.

At each observation, observers utilized both the proposed AIA and the existing instructor assessment form, Form 1152a-R. At each observation, the observer completed both the old and new form based on the instructor's performance during the same instructional period. After observers completed all three observations, they were instructed to complete the AIA Validation Surveys, both the version about the new AIA and the version about the old Form 1152a-R.

Instructors and Observers. Participants serving as both instructors *and* observers were instructed to complete the activities described for both instructors and observers above. Those conducting assessments on other instructors conducted a total of three assessments on three separate instructors. All participating personnel signed voluntary consent forms. Participants were potentially involved in self assessments, assessments of others conducted by peer, supervisor, or administrative personnel, and assessments conducted by students.

Students. Students in two WOSC courses and one WOSSC course were asked to participate at the conclusion of their multi-week course. The students who agreed to participate were asked to complete the new ALM EOC metric. Because there was an expectation that students would not have sufficient familiarity with adult learning theory or with the Army Learning Model, the research team did not believe that students could adequately make an assessment of how well the form addressed ALM criteria. WOSC and WOSSC are structured where multiple instructors teach the same section of a course. In addition, the existing WOCC end of course metrics ask for feedback regarding the entire course's merits on a variety of characteristics. Therefore, it was deemed most appropriate to have student participants rate the characteristics of the course, rather than characteristics of specific instructors. Students were briefed on the purpose of the metric and asked to report any difficulties that they had while completing it directly on the form itself.

Selected WOCC Personnel. To assess how well the ALM end of course measure assessed ALM criteria, the project sponsor identified select personnel at the WOCC familiar with ALM to assess the ability of the ALM validation survey to assess courses on ALM criteria. These individuals also completed the EOC Validation survey.

AIA and EOC Data Collection. The research team periodically collected survey data during the course of the 6 allotted weeks and collected all remaining data at the completion of the allotted time. The research team assembled data into two components, the first containing all data derived from the AIAs and associated survey forms, and second, other comments provided by participants containing additional opinions or information.

Validation Results. For validation, researchers conducted an analysis to determine both the validity of the AIA in whole and whether any changes were necessary to the form itself. Subsequent to validation and analysis, the AIA, Proposed EOC assessment questions, and the AIA Guide were updated into final versions and delivered to the WOCC.

Results

Academic Instructor Assessment

Instructor raters had limited variation in their responses when rating instructors and so many traditional analyses were unable to be performed. This ceiling effect inhibited not only the analytical approach to this validation effort, but also highlighted a limitation in the scale itself, described more fully below.

Additionally, very few instructors had complete data for all items. Raters tended to concentrate on rating a few particular instructors rather than a more even distribution of all participating instructors. As such, average instructor ratings across raters at times represent only a single rater, and at other times represent the average rating of nine separate raters. Given this disparity, the primary approach to this data was to treat each rating completion as a separate entity for purposes of assessing the overall pattern of each response. However, it should be noted that this approach does ignore the shared variability of responses raters would have across instructors and the shared variability in ratings that multiple raters would have as a result of rating the same instructor. As such, these conclusions reached below should be considered with caution. For a starting point, the distribution of responses across ALM and adult learning theory responses was examined. See Table 2 for a complete frequency count for instructor ratings.

Generally, instructor observers selected the highest scale option, *Very Well Done* and several items on the new scale had zero response variability. These items include: *Knowledge of content, Overall environment, Respect and Rapport, Professional conduct, Knowledge transfer, Knowledge base, and Professional Development.* Few raters selected anything other than the highest rating for most of the scale items, and very few raters at all selected the lowest rating. Although the research team informally concluded that the WOCC instructors were indeed of high caliber prior to any formal assessments, the ratings exhibited even more of a ceiling effect than was expected.

The same data is also displayed in Table 3 in a slightly different format. Here, the ratings are shown with their minimum, maximum and mean rating, along with the standard deviation. As can be seen, most ratings for each item were quite high across raters and instructors.

Table 2.
Instructor rating response frequency

		Response Frequency: Number of Participants selecting each response option				
Category	Competency	Needs Major Improvement	Minor Issues	Very Well Done	NA	No response
Planning and Preparation for Learning	Setup/ Classroom Preparation	0	3	53	3	1
	Handouts and Other Materials	0	3	44	12	1
	Knowledge of Content	0	0	59	0	1
Classroom Environment	Safety Standards	0	1	46	13	0
	Overall Environment	0	0	59	0	1
	Respect and Rapport	0	0	59	0	1
	Motivation	0	7	52	0	1
	Discovery Learning Principles	1	3	48	5	3
	Communication	0	4	54	1	1
	Professional Conduct	0	0	59	0	1
Delivery of Instruction	Collaborative Learning	0	2	51	4	3
	Critical Thinking, Problem Solving	0	5	52	2	1
	Job Application Relationship	0	2	57	0	1
	Knowledge Transfer	0	0	42	17	1
	Questioning Techniques	0	2	57	0	1
	Discussions	0	2	57	0	1
	Use of Technology	0	9	44	6	1
	Instructional Methods	1	3	53	2	1
	Verbal / Non-Verbal Comm.	0	3	54	1	2
	Tailored Learning	0	4	50	4	2
	Student Mistakes	0	2	39	17	2
	Time Management	0	6	52	1	1
Assessment and Monitoring	Pre-Assessment of Student	0	7	41	11	1
	Student Comprehension	1	2	51	5	1
	Student Involvement	1	6	49	3	1
Continuing Professional Responsibilities	Assessments	0	1	29	17	3
	Knowledge Base	0	0	35	11	4
	Professional Development	0	0	30	16	4
	Professionalism	0	2	38	7	4

Table 3.
Instructor mean ratings

Instructor Rating Averages					
Competency	N	Minimum	Maximum	Mean	SD
Setup/ Classroom Preparation	56	2	3	2.95	.23
Handouts and Other Materials	47	2	3	2.94	.25
Knowledge of Content	59	3	3	3.00	.00
Safety Standards	47	2	3	2.98	.15
Overall Environment	59	3	3	3.00	.00
Respect and Rapport	59	3	3	3.00	.00
Motivation	59	2	3	2.88	.33
Discovery Learning Principles	52	1	3	2.90	.36
Communication	58	2	3	2.93	.26
Professional Conduct	59	3	3	3.00	.00
Collaborative Learning	53	2	3	2.96	.19
Critical Thinking, Problem Solving	57	2	3	2.91	.29
Job Application Relationship	59	2	3	2.97	.18
Knowledge Transfer	42	3	3	3.00	.00
Questioning Techniques	59	2	3	2.97	.18
Discussions	59	2	3	2.97	.18
Use of Technology	53	2	3	2.83	.38
Instructional Methods	57	1	3	2.91	.34
Verbal / Non-Verbal Communication	57	2	3	2.95	.23
Tailored Learning	54	2	3	2.93	.26
Student Mistakes	41	2	3	2.95	.22
Time Management	58	2	3	2.90	.31
Pre-Assessment of Student Knowledge	48	2	3	2.85	.36
Student Comprehension	54	1	3	2.93	.33
Student Involvement	56	1	3	2.86	.40
Assessments	30	2	3	2.97	.18
Knowledge Base	35	3	3	3.00	.00
Professional Development	30	3	3	3.00	.00
Professionalism	39	2	3	2.97	.16

The average rating for each instructor across all raters (the average of the average) is shown in Table 4. Of course, what constitutes the average for one instructor versus another differs considerably. For some instructors, the average is the average of the ratings. For others it is the average of nine ratings. Therefore, this information should be interpreted with caution but is presented for the reader for the sake of completeness. As can be seen in this table, the mean rating was quite high, close to 3.0 on nearly every rating.

Table 4.
Instructor mean ratings across all raters

Rating Averages Across All Raters					
Competency	*N*	*Minimum*	*Maximum*	*Mean*	*SD*
Setup/ Classroom Preparation	16	2.50	3.00	2.94	0.14
Handouts and Other Materials	15	2.75	3.00	2.96	0.08
Knowledge of Content	16	3.00	3.00	3.00	0.00
Safety Standards	15	2.80	3.00	2.99	0.05
Overall Environment	16	3.00	3.00	3.00	0.00
Respect and Rapport	16	3.00	3.00	3.00	0.00
Motivation	16	2.00	3.00	2.86	0.26
Discovery Learning Principles	15	2.71	3.00	2.95	0.09
Communication	16	2.00	3.00	2.90	0.25
Professional Conduct	16	3.00	3.00	3.00	0.00
Collaborative Learning	15	2.83	3.00	2.98	0.06
Critical Thinking, Problem Solving	15	2.67	3.00	2.93	0.12
Job Application Relationship	16	2.75	3.00	2.98	0.07
Knowledge Transfer	14	3.00	3.00	3.00	0.00
Questioning Techniques	16	2.67	3.00	2.96	0.10
Discussions	16	2.67	3.00	2.97	0.09
Use of Technology	16	2.00	3.00	2.78	0.33
Instructional Methods	16	2.00	3.00	2.90	0.26
Verbal / Non-Verbal Communication	17	2.50	3.00	2.95	0.13
Tailored Learning	17	2.00	3.00	2.91	0.25
Student Mistakes	13	2.75	3.00	2.97	0.08
Time Management	17	2.00	3.00	2.89	0.25
Pre-Assessment of Student Knowledge	13	2.00	3.00	2.81	0.30
Student Comprehension	16	2.00	3.00	2.89	0.27
Student Involvement	17	2.00	3.00	2.84	0.27
Assessments	15	2.67	3.00	2.98	0.09
Knowledge Base	16	3.00	3.00	3.00	0.00
Professional Development	16	3.00	3.00	3.00	0.00
Professionalism	17	2.86	3.00	2.99	0.03

Table 5.
Instructors' self ratings and mean observer ratings

Competency	Average Ratings		
		Observers'	
	Self	Average	*N*
Setup/ Classroom Preparation	3.00	2.94	8
Handouts and Other Materials	3.00	2.96	7
Knowledge of Content	3.00	3.00	8
Safety Standards	3.00	2.99	8
Overall Environment	3.00	3.00	8
Respect and Rapport	3.00	3.00	8
Motivation	2.60	2.86	9
Discovery Learning Principles	2.50	2.95	9
Communication	2.89	2.90	8
Professional Conduct	3.00	3.00	9
Collaborative Learning	2.80	2.98	9
Critical Thinking, Problem Solving	2.70	2.93	9
Job Application Relationship	2.80	2.98	9
Knowledge Transfer	2.87	3.00	8
Questioning Techniques	2.90	2.96	9
Discussions	3.00	2.97	9
Use of Technology	2.89	2.78	8
Instructional Methods	2.78	2.90	8
Verbal / Non-Verbal Communication	2.89	2.95	8
Tailored Learning	3.00	2.91	8
Student Mistakes	2.60	2.97	4
Time Management	2.67	2.89	8
Pre-Assessment of Student Knowledge	2.50	2.81	6
Student Comprehension	2.89	2.89	8
Student Involvement	3.00	2.84	8
Assessments	2.78	2.98	7
Knowledge Base	3.00	3.00	8
Professional Development	3.00	3.00	8
Professionalism	3.00	2.99	8

Instructors were asked to complete a self-assessment using the new Academic Instructor Assessment after they were assessed by a rater. Only 9 participants had both a self-assessment and a rater/observer assessment. Therefore, typical comparisons across rating source were not feasible. Although raters themselves were quite likely to rate the instructor that they were observing highly, traditionally, individuals asked to assess themselves on a particular domain generally assess themselves more favorably than third parties. Although limited conclusions can

be drawn from an informal comparison with such a small sample, it does not appear that observers and self-assessments of an instructor's performance were notably different. See Table 5.

Beyond simply evaluating the responses that instructors and observers made to the AIA itself, observers and instructors provided feedback on how well the old form and new form compared on a variety of characteristics, including overall structure and usability of the form as well as how well the forms each assessed instructor performance in ALM content related domains. As seen in Table 6 below, the new form was rated significantly higher on some dimensions such as *grouping of similar items, organization of topics*, and *clarity of concepts, terms, and descriptions,* but not significantly higher on other dimensions. In no case, though, was the new form rated lower/more poorly on any usability dimension.

Table 6.
Usability of old form and new form

	Usability of Forms							
	Old Form		New Form		Paired Sample t-test			
	Mean	*SD*	*Mean*	*SD*	*t*	*df*	*p*	*Cohen's d*
Overall format	3.58	1.07	3.89	1.24	-1.03	18	.32	.24
Easy to understand	3.84	1.02	4.26	0.81	-1.64	18	.12	.38
Category grouping of similar items	3.74	0.93	4.21	1.03	-2.28	18	.04	.52
Organization of topics	3.74	0.87	4.26	1.05	-2.25	18	.04	.52
Size and clarity of the rating scale	3.42	1.07	3.95	1.18	-1.65	18	.12	.38
Clarity of concepts, terms, and descriptions	3.33	1.03	4.11	1.08	-3.11	17	.01	.73

In addition to improving the usability of the metric used to evaluate instructors, the more pressing purpose of this project was to improve the ability of the WOCC to assess their instructors on ALM relevant criteria. Participants rated both the new form and the old form on how well each form enabled raters to properly assess the instructor's skill in a variety of ALM-relevant domains. As can be seen in Table 7, participants strongly rated the new form as significantly better at assessing ALM instructor concepts than the existing older form.

Table 7.
New and old form comparison at measuring ALM instructor concepts

Comparison of ALM Concepts							
	Old Form		New Form		Paired-Sample T-test			
Assess the instructor's…	*Mean*	*SD*	*Mean*	*SD*	*t*	*n*	*p*	*Cohen's d*
…ability to create a collaborative learning environment	2.74	1.28	4.11	.94	-4.75	18	.000	1.09
…ability to activate students' prior knowledge in order to promote learning	2.47	1.39	4.00	.94	-4.93	18	.000	1.13
…ability to tailor the learning experience to prior student knowledge	2.47	1.35	3.84	1.19	-4.59	18	.000	1.05
…ability to serve as a learning facilitator (guide-on-the-side versus sage-on-the-stage)	2.89	1.20	4.21	1.08	-4.05	18	.001	.93
…ability to promote discovery learning (versus lecture based delivery of material)	2.63	1.42	4.32	0.89	-5.50	18	<.001	1.26
…incorporation of technology in the classroom	3.00	1.29	4.16	0.83	-3.76	18	.001	.86
…ability to promote critical thinking and incorporate problem solving techniques	2.68	1.34	4.16	0.90	-4.62	18	<.001	1.06
…ability to utilize discussion techniques	2.79	1.27	4.26	0.93	-5.27	18	<.001	1.21
…ability to relate the instructional content to the students work environment and mission	2.89	1.41	4.21	1.03	-4.44	18	<.001	1.02
… use of blended learning (multiple instructional delivery techniques)	2.42	1.43	4.32	0.75	-5.56	18	<.001	1.27
…ability to create a positive, supportive, encouraging learning environment	3.00	1.33	4.37	0.83	-4.44	18	<.001	1.03

In sum, the new AIA form was rated as significantly better organized, with clearer descriptions of concepts. Although the difference was not statistically significant, the new form was rated as better than the old form for measuring ALM content such as *Creating collaborative environment, Activating student prior knowledge, Tailoring instruction, serving as facilitator, Promoting discovery learning, Incorporating technology, Promoting critical thinking, Utilizing discussion techniques, Relating instructional content to students work environment, Using blended learning techniques*, and *Creating a positive, supportive, encouraging learning environment.* The scale length was seen as too short and restricted a variance in responses.

Final Revision. Following the analysis, we made final revisions to the AIA. The major changes of note included a change to the rating scale from a three point scale (1 – Needs Major Improvement, 2 – Minor Issues, 3 – Very Well Done) to a four point scale (1 – Needs Major Improvement, 2 – Minor Issues, 3 – Well Done, 4 – Exceptional), additional areas added for written comments to each major section, and changes made to all sections to read in active voice with sections 1 through 4 written in past tense and section 5 written in present tense (see Appendix E).

End-of-Course Assessment

End of Course Survey. As shown in Table 8, students generally gave their instructors high marks across the board. Across all courses, instructors were generally recognized as performing strongly. Although all instructor domains garnered at least one poor rating, on average students reported that they were excelling at achieving ALM and adult learning instructional competencies. Students did not indicate confusion with completing the end-of-course evaluation form. Because students had several instructors who taught a single course, the ratings are representative of their total course experience and cannot be tied to a specific instructor. Therefore, direct comparisons between student ratings and peer instructor ratings cannot be made.

Although students generally rated their instructors positively, they also provided specific feedback highlighting ways in which students felt instructors could improve. Although not all of the comments necessarily indicated how well instructors were performing in regards strictly to ALM and adult learning instructional methodologies, the students' comments clearly indicated an appreciation of the techniques associated with adult learning, even though they may not have been able to identify them as such. See Table 9 - 12 for exemplar comments.

Table 8.

Student ratings of instructors/courses on ALM and adult learning instructional competencies

	Student Ratings				
	N	*Minimum*	*Maximum*	*Mean*	*SD*
Were facilitators as opposed to lecturers?	146	1	3	2.67	.49
Encouraged content related discussions?	146	1	3	2.73	.47
Provided for learning through discovery rather than simply stating or relating content?	146	1	3	2.59	.53
Accounted for (considered, showed an awareness of) my existing experience level during delivery of instructional material?	146	1	3	2.47	.61
Provide opportunities for students to interact with other students in collaborative environments?	145	1	3	2.78	.43
Used problem solving exercises to enhance or deliver learning concepts?	145	1	3	2.71	.47
Created situations that required application of critical thinking skills?	145	1	3	2.71	.47
Incorporated modern technology into the classroom in innovative ways to boost the learning experience and reduce the learning time while maintaining learning effectiveness?	145	1	3	2.63	.54

Table 9.
Student comments on Serving as a Facilitator

ALM Component: Serving as Facilitator	
Participant Comment	Relevance to ALM adoption
The course provides a general overview of many subjects. I would like more depth in instruction to provide a better knowledge base in order to work better with senior leaders.	Reflects desire for instruction that yields real-world application.
By using a traditional assessment with matching multiple choice and fill in the blanks to evaluate students, the course can never achieve the intent of ALM. By using a more authentic assessment model the instructors will be able to move to more of a facilitator role and get away from the didactic method of instruction.	Reflects need for in-depth and realistic assessment.
Some of the topics such as Project Management / Information Management could have been related more to military scenarios rather than corporate world. However, it will be almost impossible to not use lecture format in some topics.	Reflects need for job relevance.
Facilitators need to understand current class knowledge level IOT facilitate learning of other students. At times class discussions would stray far from topic.	Identifies need for tailored instruction.
Keeping the student more engaged in study and more practical exercises help this class. More discussion time would be more effective to help us get more understanding of the study and subject.	Reflects desire and appreciation for participation and discussion versus lecture.
Streamline folders on server to make them easier to find or have all info loaded into blackboard.	Reflects need for good technology management.
Data base management basic instruction would have been useful.	Reflects need for good technology management.
Continue to move away from sequential instructional methods to continuous and progressive methods of instruction.	

Table 10.
Student comments on Accounting for Experience Level

ALM Component: Accounting for Experience Level	
Participant Comment	Relevance to ALM adoption
The experience and career field background in our class is too varied for generic curriculum we had.	Reflects need for tailored training
The course automatically takes into account current level of experiences that represents grade level.	Reflects need for tailored training
Instructors effectively used overall experience of class. The best way to improve would be to separate groups into a more diverse assortment of individuals to maximize differences in experience.	One suggestion for tailored training
I think a pre-course survey may help with consideration of experience levels. This could be done as part of the DL Phase I portion of the class.	One suggestion for tailored training
Perhaps a survey or questionnaire could be developed to capture the experience level. There were many classes I was not familiar with and my experience was never a consideration as to the teaching techniques.	One suggestion for tailored training

Table 11.
Student comments on Incorporating Technology

ALM Component: Incorporating Technology
I would introduce tablets or laptops. With the program being all digital, tablets could make study and research more powerful. Students could carry notes and study back and forth to class.
Have class held over the internet. i.e.… Adobe Connect and more use of Blackboard.
The student server, syllabus, and blackboard were not always aligned and sometimes misleading. KM not squared away.
Provide CDs for material taught in class. Blackboard was not accessible in lodging due to poor network.
Modern technology only goes so far: PowerPoint, internet video clips, etc.
Resources were scattered between Blackboard, network shared drive, and AKO. To the extent possible, one method should be used and enforced - preferably Blackboard.
Provide info on disk prior to class. IPADs would be a great addition to modern technology.
Technology and the use of Blackboard is what hurt this class.
Incorporating mobile technology is a must. Also use a SharePoint for knowledge management. Stop using desktops. Possibly using tablets or something similar to incorporate modern technology into the class.
Projection equipment needs to be improved. Possible use of smart boards.
Update visual systems. Projector's out of date or needs repair.
Smart boards rather than butcher block paper. VTC capability to interact with guest speakers or SME's. SIPR must be made available.
At times there was over use of technology and at others, no use at all. Recommend a review of the individual classes prior to presentation.

For an alternate view of how well the new ALM end of course evaluation form performed as a means of assessing the courses and their instructors from the students' perspectives, a select group of WOCC personnel completed the EOC validation form. The selected WOCC personnel were chosen to complete this form as they were the individuals most familiar with ALM and adult learning theory. Their responses are indicated below in Table 11. In sum, the respondents indicated that the new ALM End of Course questions assessed ALM criteria fairly well.

Table 12.
Select personnel responses to EOC questions

	Descriptive Statistics				
	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
Creation of a collaborative learning environment?	12	3	5	4.17	.835
Tailoring the learning experience to prior student knowledge?	13	2	5	4.00	1.155
Instructors serving as a learning facilitator (guide-on-the-side versus sage-on-the-stage)?	13	2	5	4.23	1.013
Use of discovery learning techniques (versus lecture-based delivery of material)?	13	2	5	4.15	.899
Incorporation of technology in the classroom?	12	2	5	4.08	1.165
Use of critical thinking and problem solving techniques?	13	3	5	4.31	.751
Use of discussion techniques?	12	2	5	4.25	.965
Were the form's questions stated in terms that students not familiar with ALM/ALC 2015 concepts or adult learning theory could easily understand and answer?	13	1	5	3.92	1.320
Are the questions that relate to ALM/ALC 2015 appropriate and adequate to cover the major concepts?	13	2	5	4.08	1.115

In addition to the ratings that participants provided regarding the validity and adequacy of the new EOC, some participants also provided comments and suggestions regarding additional ways in which the EOC form could be improved. One particular comment was a suggestion to utilize a broader scale. During revisions, the research team expanded the response scale from 3 points to 4 points, allowing for a wider range of responses on the EOC. This comment falls in line with the range of student responses on the EOC reflecting that the vast majority of student responses were a 3, the highest rating possible.

Another primary recommendation regarding the revised EOC was to incorporate questions assessing how well the course incorporated 21st century Soldier competencies. Although these competencies are not directly related to ALM criteria, the research team incorporated an item to address this concern in the revision process.

A subjective assessment of all comments received during validation provided the following two major comments. First, participants saw the questions proposed for inclusion in student EOC assessments as good questions to help assess instructor performance regarding adult learning concepts from a student's standpoint. Second, they felt the rating scale needed to be broadened as noted in the AIA validation.

Final Revision. The major revision to the proposed EOC questions used during validation was the change from a three point to a four point rating scale and the addition of four questions pertaining to life-long learning and instructor character (Appendix F).

Academic Instructor Assessment Guide

The AIA Guide included three major sections, Sections 1, 2, and 3, with an additional two sections for references and appendices. The Introduction, Section 1, describes the AIA, the rating scale, key points, the use of feedback, the self assessment, and key terms. Section 2, Understanding the Concepts, is arranged to crosswalk with the AIA itself. Each of the competencies listed in the AIA has a corresponding discussion in the guide, outlined in the same sequence. Readers desiring more information on a particular competency can read a discussion on that topic without having to read the previous content. Duplication of some material was necessary throughout the guide since many of the adult learning theory concepts are closely related and discussed in two or more competencies in separate areas. Section 3 contains the Conclusion.

Typical references used for source material is provided in the reference section of the guide both numerically and alphabetically. In addition, supplementary references pertaining to a particular topic are provided at the end of some discussions in Section 2 for those wishing additional information beyond the material presented in the guide. Those references are mainly provided for adult learning concepts that readers may be less familiar with. The final draft of the AIA Guide given to the WOCC for review is provided in Appendix G.

Discussion

AIA Development and Use

The instructor assessment form currently used by classroom observers at the WOCC, the Academic Instructor Evaluation Checklist, predates ALM instructional concepts and reflects the common lecture approach to information delivery in the classroom. Lecture-based formats do not, however, often lend themselves to ALM concepts and adult-learning principles such as the use of active learning through problem solving and critical thinking. The ALM shift in training methodologies away from platform, lecture-based instruction to learning strategies based on discovery learning techniques geared toward adult learners prompted a need to design a comparable assessment form that assessed the newly prioritized instructional techniques. The new assessment form would need to include areas for rating instructor competencies consistent with ALM instructional concepts.

During the AIA validation phase, a recurring comment from validation participants was in reference to the proposed rating scale. The checklist currently used at the WOCC is based on a two point scale with either a "Go" or a "No Go" for each rated area. Additional blocks are provided to mark if an area was not evaluated or not applicable. The two point scale was determined to be too confining with no room for interpretation of an instructor's performance other than good or bad. The scale proposed on the new form used in validation was a three point scale ranging from "1 - Needs Major Improvement," "2 - Minor Issues," to "3 – Very Well Done." The intent was to offer the rater more choices in rating without making it too difficult to determine where an individual should be rated. While this scale offered a broader range of rating selections, validation participants felt it was still too narrow and that the midpoint conveyed a negative rather than neutral tone. While a rating of "2" was thought to be satisfactory by the development team, the accompanying label of "Minor Issues" was seen as having a negative connotation by validation personnel.

General experience has shown that raters of personnel performance throughout the Army tend to rate on the more positive side unless the rated individual clearly had substantial problems, as negative or even mediocre ratings can have a detrimental effect on Army careers. With a wider scale, raters can indicate that while an individual's performance may not have been great or outstanding, it was still fairly good or at least above average. The proposed three point scale was viewed as limiting ratings to great, satisfactory, or bad with the satisfactory rating still alluding to some problems noted. As a result, the research team modified the scale to a four point scale post validation. The four point scale ranged from "1 - Needs Major Improvement," "2 - Minor Issues," "3 –Well Done," to "4 – Exceptional." Subsequent comments from the WOCC stated they preferred this scale much better as it was not too large and offered the rater flexibility in ratings.

WOCC's existing form for documenting classroom observations has in its title the term "Evaluation." The new form uses the term "Assessment." The team believed this was an essential element in terms of designing and understanding the proper use of the new form. An evaluation is routinely seen as written documentation of how one performed at a given time and would be saved as a "grade" for use by staff personnel, if needed, in the future. An assessment, however, is viewed more as an in-progress report to be used in the present by the one being assessed to enhance the ongoing process. ALM and modern adult learning theory are focused on enhancing the learning experience of the student as much as possible. The challenge for ALM classrooms is to instill a change in the minds of all academic personnel, to include instructors, observers, and staff, the way classroom assessments are viewed and used.

Assessments should be conducted to aid the instructors in their professional development and ultimately improve student learning outcomes. First, however, assessments used in professional development must be positively perceived by the instructors themselves. They should enhance their knowledge and skills as well as have an impact upon their instructional behavior (Kutner et al., 1997). It is imperative that assessments also be seen by administrative personnel as a tool to help instructors improve on weak areas and not a document containing data solely for positive or punitive actions. Instructors need to know that assessments are for them to use in helping to improve their instructional techniques as opposed to documents for staff and leaders. Post-looking, final-grade-on-performance documents do little to assist an instructor

looking to enhance the students' learning experience. Forward-looking assessments for an ongoing practice can more readily assist in identifying areas needing improvement to a willing instructor. The challenge for institutions is to find ways to change how assessments are viewed, understood and used.

One prevailing thought by educators is that multiple assessments and multiple types of assessments are necessary to obtain a complete picture of an instructor's teaching methods, classroom techniques, and other instructional practices. Single assessments by one observer are not good indicators of instructor performance. Multiple assessments are necessary to gain a clearer picture of overall performance. Cumulative ratings can point to trends in instructional practices and help account for items that may skew the results such as individual rater preferences or lesson content that drives the use or non-use of particular methods. Ratings are a subjective assessment from the stand point of one person's observation. Instructors should also conduct self-assessments and review their own ratings along with all other ratings with an eye on implementing strategies in the classroom to enhance weak areas and to help provide a better learning experience for the students.

EOC Assessment

The WOCC provides students the opportunity to comment on their learning experience at the end of their course in an EOC assessment. The assessment is a computer based list of questions seeking comments on Fort Rucker and the school itself as well as their learning experience. Questions regarding their learning experience are very broad and general in nature focusing on clarity of objectives, whether the objectives were met, and whether the course met their expectations. As discussed previously in this report, ALM requirements include concepts on how instructors should deliver the content of the course. ALM methodologies require a move from a lecture-based delivery to discovery learning through the use of facilitation. Currently, the EOC student assessment does not include questions seeking comments related to the instructor's use of these ALM or adult learning concepts.

While the AIA can be a valuable resource for assessing ALM concepts from an administrator, senior leader, peer, or self assessment standpoint, it does not account for an assessment from a student perspective. As another avenue of collecting valuable ALM related information, additional EOC questions were suggested and accepted to be included with the questions currently used. The additional questions were written in understandable terms which those unfamiliar with ALM concepts or terms can easily comprehend. The additional questions allow for an assessment of ALM concepts from a student's perspective. The present research found that the proposed questions could help assess instructor performance regarding adult learning concepts from another viewpoint. Ultimately the proposed EOC questions were formatted with a four point rating scale similar to the AIA scale to accommodate user needs and requests.

Impact of ALM on Classroom Instruction

        The AIA developed in this project incorporates a comprehensive list of instructor competencies that include areas involving planning, preparation, and classroom environment as well as ALM delivery concepts and methods. Although the form covers competencies consistent with ALM, many instructors are not aware of ALM concepts and are not trained in methods of implementation. Information gathered during instructor and academic personnel interview sessions determined that only some of the personnel were familiar with the existence of the ALM or the ALC 2015 doctrinal publication. Of that number, very few were familiar with the adult learning concepts contained within them. ALM methods incorporate a new focus for instructors in delivery of knowledge-based material to a classroom-based student. As a consequence, instructors must become familiar with adult learning concepts, techniques and methodologies in order to adequately employ them in classroom environments. A number of issues that became apparent during this project and impact the implementation of adult learning methods include the training necessary for instructors to implement ALM methods, the training and education of those personnel evaluating ALM-based classroom instruction, and a plan for bridging the gap between current practices and full implementation of the ALM.

        Currently, at the WOCC, there is no formal training on ALM concepts during the instructor certification process. While WOCC's instructor certification process follows the mandates set in TRADOC regulations, those regulations do not stipulate ALM training. Whether or not certification regulations will soon reflect the need for ALM training, it is apparent that if current or upcoming instructors are to implement adult learning concepts in the classroom then they must be afforded the opportunity to learn them. Assessment of an instructor's performance in the classroom against a standard requirement, ALM, can be unjust if the one being assessed is not provided the tools necessary to perform at that standard. Whether required by doctrinal publications or not, some form of training on adult learning concepts should be provided for instructors.

        In conjunction with instructor training, those required to observe and assess instructors must also be trained. Many of those placed in a position of assessing instructors were at some point instructors themselves. Many are in academic staff positions within their respective training institutions and may not be currently instructing. These individuals are often senior personnel even more ingrained in the lecture-based approach to classroom instruction through their years of examples both on and off the platform. Since these are the "raters" for instructors on the requirement to implement ALM techniques in the classroom, they must also be trained on ALM concepts and must know as much, if not more, than the instructors themselves on effective instructional methodologies. Like the need for providing ALM training to instructors, it is equally apparent that training must be provided for those rating the instructors on adult learning methodologies.

        The ALM describes a vision of how Army classroom instruction should be conducted by the year 2015. The model recognizes that this change in approach to training cannot and will not be immediate. The intent is not to wait until 2015 to make a change, but rather begin to change now with full integration by 2015. The change will be a process over time rather than a sudden

implementation. Unlike a forced "learn it today and use it" new computer operating system that downloads and takes effect with the click of a button, ALM will take time, training, and practice. It will need to be integrated as a work-in-progress as training institutions, academic personnel, instructors, and students become familiar with ALM concepts, techniques, and instructional methodologies. Some academic personnel engrained in legacy type lecture-based format may offer some resistance to change and be reluctant to learn new techniques. Institutions will need to consider how this process will take place and what and when concepts will be integrated between the years leading up to 2015. Waiting until 2015 to begin implementation will leave those choosing that course far behind the power curve.

The AIA Guide

The AIA Guide was designed as part of this project to accompany the AIA and to primarily assist the instructors themselves. Its purpose is to help instructors identify ways to continually improve their performance in the classroom. Raters, staff, and any other personnel may also find the Guide useful. The intent behind the Guide format was to mirror the basic format of the AIA in order to make it simple and convenient for users. Although the AIA and AIA Guide were developed for the WOCC during this research effort, the content contained is not specific to the WOCC and can be applicable to all academic agencies implementing ALM concepts.

In some instances, duplication of material within the Guide was necessary for two main reasons. First, the Guide was not designed as a document to be read from beginning to end but rather as a source for additional information or to study a particular topic. Section 2, Understanding the Concepts, is arranged to crosswalk directly with the AIA. Each of the competencies listed in the AIA has a corresponding discussion in the Guide. These competencies include the adult learning concepts found in the ALM and throughout adult learning theory. Readers who want to know more information on a particular competency can easily access that section without having to read the earlier content. Therefore, during discussions of two or more competencies in separate areas of the Guide some repetition of material was necessary in order to fully introduce the topic had the reader jumped straight to that section. Second, research determined that many adult learning theory concepts are closely related. As an example "facilitation" rather than "lecture" is one concept. "Effective questioning" as opposed to answering questions directly is another. However, facilitation is discussed in sections such as "Discussion Techniques," as part of "Instructional Methods," and also involves effective questioning found in "Questioning Techniques." Duplication of some material was intentional in some sections to facilitate reader understanding.

Conclusions

This research concluded that the current TRADOC form used for assessment of WOCC instructors is focused on a lecture based approach to instruction. That approach allows for little if any assessment of an instructor's performance in the classroom as it applies to the ALM and adult learning theory concepts. To implement ALM concepts as directed, a new assessment form must follow in order to align ratings with doctrinal requirements. In addition, implementation

will require instructors and other academic personnel not only to become familiar with adult learning concepts, but also to understand how to apply them in the classroom. Many personnel are unfamiliar with ALM concepts and training will be required to educate academic personnel on the principles and methods used to implement them.

Implementation of ALM concepts will be a process over time as opposed to a broad base sudden change in classroom procedures. Students and instructors will experience a gradual learning curve as academic agencies move toward implementation. As instructors prepare to implement adult learning concepts they must understand the adult learning concepts they are being rated against. This understanding is critical in order to improve their instructional techniques and the student's learning experience. To help, the AIA Guide can serve as a valuable tool for information and further research. Instructors and staff must also understand that a single assessment is not a complete picture. Multiple assessments and means of evaluating instructor effectiveness are best for gaining an overall look at how well an instructor is performing in the classroom.

Apart from the AIA, the EOC assessment is completed by students and can be another means of assessing ALM concepts in the WOCC classroom. Although students may not be explicitly familiar with formal ALM methodologies, they can still provide valuable information regarding an instructor's use of adult learning concepts as another avenue for feedback. Together the AIA and EOC should be seen as tools to be used to help instructors enhance their classroom effectiveness and, in turn, the learning experience of the students.

For those deeply ingrained in the lecture-based delivery of instruction, there will be some reluctance and resistance to changing the approach to classroom instruction. Some students may view the new approach as an instructor shirking the duties of teaching off onto students as the instructor's implements discovery learning methods. In reality, implementation of effective adult learning procedures in the classroom is often more difficult and time consuming for an instructor than a straight lecture-based approach. Principles and adult learning methods consistent with the ALM often require more preparation as instructors determine which methods to incorporate into a particular block and then prepare the associated material necessary for implementation. The work reported here will assist WOCC instructors in gauging how well they are employing those ALM principles and adult learning methods.

References

Berk, R. A. (2005). Survey of 12 strategies to measure teaching effectiveness. *International Journal of Teaching and Learning in Higher Education. 17*(1), 48-62.

Binder, C. (March,2001). Measurement: A few important ideas. *Performance Improvement. 40*(3). 20-28. In Chevalier, R. (2004). *Human performance technology revisited.* International Society for Performance Improvement. Silver Spring: MD. 253-261.

Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). Learning and transfer, *How people learn: Brain, mind, experience, and school*, 55. Washington, DC: National Academy Press.

Caruso, S. (2010). Malcolm Knowles and the Six Assumptions Underlying Andragogy. Retrieved from http://www.eadulteducation.org/adult-learning/malcolm-knowles-and-the-six-assumptions-underlying-andragogy/

Childs, J. M., Schaab, B. B., & Blankenbeckler, P. N. (2002). *Digital Skill Learning Using Constructivist Training Methods.* Interservice/Industry Training Simulation & Education Conference Proceedings. Orlando, FL: National Training Systems Association.

Devendorf, S. (2003). *John Dewey: A Pioneer in Educational Philosophy.* Unpublished master's thesis, Oswego State University of New York, Oswego, NY.

Jonassen, D. H. (1994). Thinking technology: Toward a constructivist design model. *Educational Technology, 34*(3), 34-37.

King, C. J., Ambrose, S. A., Arreola, R. A., & Watson, K. (2009). *Developing metrics for assessing engineering instruction: What gets measured is what gets improved.* National Academies Press: Washington, DC.

Kutner, M., Sherman, R., Tibbetts, J., Condelli, L. (1997). *Evaluating Professional Development: A Framework for Adult Education,* 1-5. Washington, DC: U.S. Department of Education, Division of Adult Education and Literacy.

Lacefield, R. S. (1999). Adult Education in Practice, Teaching Methods and Course Structure. *Adult Education Tipsheets.* Waycross College, Waycross, GA.

Merrill, M. D. (2002). "First principles of instruction." *Educational Technology Research and Development 50*(3): 43-59.

Tweedell, C. B. (n.d.). *The History of Adult Learning Theory.* Center for Research in Adult Learning, Indiana Wesleyan University, Marion, IN.

U.S. Department of Army. (2011a, January). TRADOC Pam 525-8-2, *The U.S. Army learning concept for 2015*. Washington DC: Author.

U.S. Department of the Army. (2011b, December). TRADOC Regulation 350-70. *Army learning policy and systems*. Fort Eustis, VA: Headquarters, Department of the Army.

Warrant Officer Career College. (2011, December). *Course Management Plan (CMP) Warrant Officer Senior Staff Course.* Fort Rucker, AL: Warrant Officer Career College.

Zemke, R. & Zemke, S. (1995). Adult Learning: What do we know for sure?, *TRAINING Magazine,* June 1995, 41-43. Minneapolis, MN: Lakewood Publications.

Acronyms

ABIC	Army Basic Instructor Course
AIA	Academic Instructor Assessment
AID	Academic Instruction Division
ALC	Army Learning Concept
ALC 2015	Army Learning Concept 2015 (TRADOC Pam 525-8-2)
ALM	Army Learning Model
ARI	U.S. Army Research Institute
CMP	Course Management Plan
CW5	Chief Warrant Officer 5
DOET	Director of Education & Training
EOC	End-of-Course
IDP	Initial Development Plan
ITC	Instructor Training Course
NA	Not Applicable / Not Assessed
NE	Not Evaluated
SFCT	Staff and Faculty Common Training
SFDB	Staff and Faculty Development Branch
SGA	Small Group Advisor
SGL	Small Group Leader
SOP	Standard Operating Procedure
TASS	Total Army Schools System
TRADOC	U.S. Army Training and Doctrine Command
USAAWC	United States Army Aviation Warfighting Center
WOCC	Warrant Officer Career College
WOSC	Warrant Officer Staff Course
WOSSC	Warrant Officer Senior Staff Course

APPENDIX A

ACADEMIC INSTRUCTOR EVALUATION CHECKLIST

REQUESTED DATA REQUIRED BY THE PRIVACY ACT OF 1974

AUTHORITY: Executive Order 9397 and Title 10, USC, SEC 3013.

PRINCIPAL PURPOSE: To provide information for administrative and statistical purposes.

ROUTINE USE: To track instructor-related training and evaluations in order to ensure the accuracy of qualifications and certification data.

DISCLOSURE: Voluntary. Failure to provide requested information could cause inaccuracies in the individual's records.

1. Verified that Instructor Records are maintained IAW TRADOC Reg 350-18:	YES ☐ NO ☐	2. Date:

3. Instructor Name (Last, First, MI):		4. Rank:	5. SSN:

6. Organization/Unit:	7. Supervisor's Name/Phone No.:

8. Course Title:	9. Lesson Title:

10. Evaluation Type: (Check all that applies) ☐ Technical/Tactical ☐ Technique ☐ Qualification ☐ Certification

(Check One) ☐ Quarterly ☐ Annual ☐ Senior Instructor ☐ Master Instructor Other (Specify):

Instructions to evaluator. Evaluate each item on the checklist. Refer to back of form for explanation of asterisked (*) items. Rate each item as GO, NG (No-Go), NE (Note Evaluated), or NA (Not applicable). Complete all sections of the form.

Instructor Action	GO	NG	NE	NA
11. **CLASSROOM PREPARATION**				
a. * Training environment meets safety, comfort, and hygiene standards.				
b. * Risk control measures are identified, emphasized, and warning signs placed where required.				
c. * Visitor area and folder arranged in accordance with policy.				
d. Seating arrangements are adequate for class.				
e. Vinyl signs (instructor rank and name, subject title, etc.) are displayed.				
f. Training aids are in position and operable.				
g. Distracters are reduced/eliminated whenever possible.				
h. Current lesson plan is used by the instructor and a copy available for evaluator.				
12. **INTRODUCTION**				
a. Motivator gained students' attention and interest and emphasized lesson importance.				
b. * Terminal Learning Objective (action, conditions, and standards) was stated and explained.				
c. Safety and environmental considerations were stressed (training and job related).				
d. Risk assessment level stated.				
e. Evaluation requirements stated.				
13. **PRESENTATION**				
a. * Knowledge of subject matter was confidently demonstrated.				
b. Lesson plan used effectively.				
c. Lesson plan learning steps/activities clearly presented and explained.				
d. Relationship of training to job performance was explained.				
e. Transitions were smooth and effectively used.				
f. Professional instructor-student relationship was established and maintained.				
g. Student participation encouraged (engaged students every three to six minutes).				
h. Student comprehension evaluated during frequent checks-on-learning and practice.				
i. All students actively involved with lesson.				
j. Effective questioning techniques (ask, pause, call, and evaluate) were used.				
k. Training aids/media were effectively used.				
l. Gestures and posture were appropriate.				
m. Distracting mannerisms were avoided.				
n. Communication skills were effectively used.				
o. Verbal distracters (crutch words/phrases/sounds) were avoided.				
p. Eye contact, direct and impartial, was maintained throughout presentation.				
q. Attitude appeared to be positive and professional at all times.				
r. Proper control of the class was maintained.				
s. Safety was emphasized where required.				
14. **SUMMARY**				
a. Check-on -learning questions were asked.				
b. Learning objective(s) was (were) reviewed and lesson summarized (may be interim summary).				
c. Safety was reemphasized where required.				
d. Closing statement was appropriate.				
15. **TIMING**				
a. Internal times were appropriate for lesson, student understanding, practice, etc…				
b. Overall time was within the lesson requirements.				

USAAWC (G-3) FORM 1152a-R, JUN 2007   PREVIOUS EDITION IS OBSOLETE.

ACADEMIC INSTRUCTOR EVALUATION CHECKLIST

* <u>Standard to achieve an overall rating of "GO"</u>. The instructor must receive a "GO" rating for ALL instructor actions identified by an asterisk (*), and no more than three (3) rating of "No-Go" for the remaining items.

16. Evaluation Rating: ☐ GO ☐ NO GO

17. REMARKS COMPLETED BY THE EVALUATOR

Explain each instructor action that is evaluated as NG, NE, or NA. Include recommendations for improvement in this section. Also, include all comments of an outstanding nature.

18. EVALUATOR'S NAME, RANK, ORGANIZATION (Printed):

19. EVALUATOR'S SIGNATURE:

20. INSTRUCTOR COMMENTS:

21. INSTRUCTOR'S SIGNATURE:

22. DATE:

USAAWC (G-3) FORM 1152a-R, JUN 2007 (BACK)

A-2

APPENDIX B

WOCC Academic Personnel Interview Questions for Transforming Warrant Officer Instructor and End-of-Course Metrics for ALM

WOCC Command Group Interview Questions

Section 1: WOCC Office of the Commandant (Commandant, Deputy Commandant, Program & Management Assistant)
- What major challenges does the WOCC face in becoming ALC 2015 compliant?
- What must be done to mitigate those challenges?
- What steps have been taken to align the WOCC to ALC 2015 concept principles?

Section 2: WOCC Education and Training/S3 (Director of Education & Training, Chief of Academic Operations, Warrant Officer Courses Directors, Registrar & Student Services)

Section 2a: General
- How are the instruction delivery methods used in the Warrant Officer courses aligning with ALC 2015 adult learning concepts?
- What challenges does the WOCC face in becoming ALC 2015 compliant?
- What WOCC instructor prerequisites are in place to ensure selected personnel are prepared to perform as instructors aligned with ALC 2015 concepts?

Section 2b: Instructor Certification
- What steps must occur in education and training of instructors at the WOCC to align with ALC 2015 concepts?
- What ALC 2015 concepts are being taught in the Instructor Training Course (ITC)?
- What ALC 2015 concepts are NOT being taught in the ITC?
- What is the WOCC plan to overcome these shortfalls in instructor train-up?
- What is included in the ITC end-of-course certification process?
- In addition to ITC, is there any additional adult learning concept training provided by the WOCC for potential instructors?
- In the instructor certification process, are the currently certified instructors that candidate instructors observe using ALC 2015 adult learning techniques?

Section 2c: Instructor Evaluations
- How effective are current WOCC practices for instructor evaluations?
- How do the current instructor evaluations align with ALC 2015 adult learning concepts?
- How does the WOCC validate proposed evaluation metrics for the academic facilitators on staff?
- What type of training material or job aids are used to direct WOCC personnel on how to use evaluation metrics?
- How do the instructors currently receive feedback on performance evaluations?
- Are instructor evaluators skilled in ALC 2015 adult learning concepts, so they apply them during their evaluations?

- How is the data derived from instructor evaluations compiled and used?

Section 2d: Instructor Development
- How effective are current WOCC practices for instructor self-assessments?
- How do the current instructor self-assessments align with ALC 2015 adult learning concepts?

WOCC Academic Facilitators Interview Questions

Section 1: WOCC Academic Facilitators (Instructors)

Section 1a: General
- How well are the instructional methods used in the Warrant Officer courses aligning with ALC 2015 adult learning concepts?
- What needs to be accomplished in the current courses to align better with ALC 2015?
- What is needed to facilitate the transition from "instructor-centric" to "learner-centric" training?
- How well is the "guide on the side" as opposed to the "sage on the stage" principal being applied throughout the WOCC during classroom instruction?
- What instruction delivery tools would assist you in facilitating student learning using ALC 2015 adult learning concepts?

Section 1b: Instructor Evaluations
- How effective is the current instructor performance evaluation process at the WOCC?
- Do you think the instructor evaluations conducted at the WOCC are a fair assessment of instructor performance?
- Are instructor evaluations using ALC 2015 adult learning concepts?
- If you could change how instructor performance is evaluated, what process/metrics/methods would you include?
- What feedback do you receive from instructor evaluations (during course and end-of-course evaluations)?
- How do you use the feedback from instructor evaluations?

Section 1c: Instructor Development
- How effective are current WOCC practices for instructor self-assessments?
- Do you currently use an instructor self-assessment form or checklist?
- How well does instructor self-assessment align with ALC 2015 adult learning concepts?

Section 2: WOCC Senior Class Mentors and Academic Advisors
- What are the key factors you look for when evaluating an instructor's performance?
- How do you and the WOCC evaluate an instructor's development, certification, and performance?
- How effective are current WOCC practices for instructor evaluations?
- How effective are current WOCC practices for instructor self-assessments?

- If you could change how instructor performance is evaluated, what process/metrics/methods would you include?
- How do you use the data derived from instructor evaluations?
- Are instructor evaluations being conducted incorporating ALC 2015 adult learning concepts?
- What are the main ALC 2015 instructor concepts that you focus on when evaluating instructor performance?
- How are the instructor delivery methods used in the Warrant Officer courses aligning with ALC 2015 adult learning concepts?
- In what areas do you think ALC 2015 adult learning concepts are not being met in the WOCC?

Academic Instructor Evaluation Metric Crosswalk

1. Planning and Preparation for Learning

	Competency	Evidence of Competency	3	2	1	Rating (1,2,3,NE)	ALC 2015	Adult Learning Concepts	WOCC Evaluation Checklist
a.	Classroom Preparation / Setup	• Classroom set up was complete prior to class. • Room arrangement, teaching aids, and classroom were set up for maximum efficiency to facilitate instruction.	Timely and efficient set up	Minor issues	Needs major improvement				11.c 11.d 11.e 11.g
b.	Handouts and Other Materials	• Prepared supplemental materials to aid instruction. • Designed supplemental materials with up to date relevant information.	Useful, current, and accurate	Needs minor improvement	Needs major improvement or not used				11.f 11.h
c.	Knowledge and Accuracy of Content	• Displayed an in depth knowledge of course content. • Current on changes to subject content. • Able to mentally retrieve information quickly.	Demonstrated current, accurate, and in depth knowledge	Minor issues	Needs major improvement				13.a

2. Classroom Environment

	Competency	Evidence of Competency	3	2	1	Rating (1,2,3,NE)	ALC 2015	Adult Learning Concepts	WOCC Evaluation Checklist
a.	Safety Standards	• Conducted training within safety, comfort, and hygiene standards.	All Standards met	Minor issues	Standards not adhered to				11.a 11.b 12.c 12.d 13.s 14.c

b.	Overall Environment	• Created a positive, supportive, encouraging environment. • Created a classroom environment that facilitated adult student learning.	Well created adult learning environment	Needs minor improvement	Needs major improvement			4.a 4.c 4.j	
c.	Respect and Rapport	• Established a fair and respectful learning environment. • Created a classroom climate where students were comfortable in sharing ideas. • Ensured respect was maintained between instructor and students and among the students themselves.	Respect and rapport maintained throughout	Minor issues	Needs major improvement		2.a 2.e 2.h	4.j	13.f
d.	Motivation	• Presented information through delivery techniques that motivated students to learn the course content. • Used appropriate instructional methods containing relevant content to motivate students to become engaged in active learning.	Students well motivated	Minor issues	Major motivational issues		3.c	4.e	12.a
e.	Discovery Learning Principles	• Ensured the discovery learning process and methodologies were made transparent to the students. • Ensured the explicit teaching / learning objectives for the instruction were transparent to the class in order to facilitate discovery learning. • Established a spirit of collaborative learning among students. • Shifted responsibility for learning from the instructor to the student and became a facilitator rather than the delivery method for information.	Discovery learning principles thoroughly applied	Needs minor improvement	Needs major improvement or not applied		1.a 1.c 2.e	4.a 4.b	12.b* 14.b* * Adult learning concepts are in direct contradiction to current practices.
f.	Communication	• Fostered communication and collaboration between the students.	Students actively engaged	Minor issues	Little or no engagement between students		1.a 2.e 2.f	4.b 4.d 4.j	
g.	Professional Conduct	• Maintained professional conduct including verbal and non verbal mannerisms throughout the course of instruction.	Professional conduct maintained	Minor issues	Major issues				13.f 13.q

3. Delivery of Instruction

	Competency	Evidence of Competency	3	2	1	Rating (1,2,3,NE)	ALC 2015	Adult Learning Concepts	WOCC Evaluation Checklist
a.	Collaborative Learning	• Implemented student-centered instructional activities that allowed for learning to take place between the students themselves. • Designed problem solving PEs and demonstrations that allowed for students to participate in active student discussions and to arrive at solutions through exploration and discovery. • Designed student instructional groups to allow learners to work in a climate of collaboration.	Effective use of collaborative learning techniques	Needs minor improvement	Needs major improvement		1.a 2.e	4.b 4.d 4.j	13.g
b.	Critical Thinking, Discussions, Problem Solving	• Used instructional methods and activities to facilitate opportunities for students to use critical thinking skills. • Placed students in situations that challenged their conceptions, created contradictions, and promoted discussions.	Instruction fostered critical thinking and problem solving	Needs minor improvement	Needs major improvement		1.a 2.e 2.g	4.b 4.d	13.g
c.	Job Application Relationship	• Demonstrated application, relevancy and relationship of instruction to student's job or work environment. • Presented practical exercises and discussions in context towards job related events and in real world situations.	Instruction real world / job related	Needs minor improvement	Little or no relationship to real world / job		3.b	4.e 4.f	12.a 13.d
d.	Knowledge Transfer	• Designed practical exercises to apply and transfer student's current and new knowledge to new situations.	PEs fostered transfer of knowledge	Needs minor improvement	Needs major improvement		1.j 2.c 3.b	4.f 4.g	

e.	Questioning Techniques	• Asked thoughtful, open-ended questions that encouraged critical thinking. • Asked follow up questions and sought elaboration and clarification of a student's answer after an initial response. • Turned questions back to the students rather than giving a direct answer. • Had students explain why they believed a particular answer was correct. • Allowed for time after asking a question for students to reflect, think, and respond.	Effective questioning techniques used	Needs minor improvement	Major questioning technique issues			4.a 4.h	13.g 13.j
f.	Discussions	• Allowed for students freedom of discovery of knowledge while effectively steering the focus of discussions toward course objectives when off track. • Encouraged discussions of difference of opinions and alternate solutions between students. • Effectively introduced overlooked data, different perspectives, and learning points into discussions when necessary.	Effective discussion techniques used	Needs minor improvement	Major discussion technique issues		1.a 2.e 2.f	4.a 4.j	13.g 13.r
g.	Use of Technology	• Implemented technology into the classroom to enhance student learning • Demonstrated appropriate skill level for technology events incorporated into classroom.	Technology used effectively	Minor issues	Little, poor or no use of technology		1.c 1.f 1.g 2.d 3.e	4.i	13.k
h.	Instructional Methods	• Adapted instructional strategies using a variety of adult learning concepts and instructional techniques. • Delivered the course content using the appropriate distribution of instructional methods. • Made wide use of instructional methods with high retention rates for adult learners.	Effective use of various instructional methods	Needs minor improvement	Needs major improvement		1.c 1.f 1.g 2.d 2.e 2.f 2.g 3.e	4.a 4.b 4.c 4.d 4.i	
i.	Verbal / Non-Verbal Communication	• Used appropriate verbal and non-verbal communication techniques that encouraged students to engage in the learning process. • Avoided inappropriate or distracting verbal and non-verbal mannerisms.	Appropriate use of communication techniques	Minor issues	Major issues				13.e 13.l 13.m 13.n 13.o 13.p

C-4

	Competency	Evidence of Competency	3	2	1	Rating (1,2,3,NE)	ALC 2015	Adult Learning Concepts	WOCC Evaluation Checklist
j.	Tailored Learning	• Linked new information to earlier lessons or to student's prior knowledge and experiences.	Effective use of previous knowledge	Needs minor improvement	Little or no linkage to prior knowledge		1.b 3.a	4.f 4.g	
k.	Student Mistakes	• Used methods, such as discussions and questions, to examine appropriate solutions rather than direct correction of wrong answers. • Effectively used student mistakes as a positive learning tool.	Effective use of student mistakes	Minor issues	Poor response to student mistakes		3.d	4.h	
l.	Time Management	• Structured the instruction of course content to meet course objectives within the allotted time. • Allotted appropriate time for each instructional methodology used.	Efficient use of time	Minor efficiency issues	Not efficiently planned or executed				15.a 15.b

4. Assessment and Monitoring

	Competency	Evidence of Competency	3	2	1	Rating (1,2,3,NE)	ALC 2015	Adult Learning Concepts	WOCC Evaluation Checklist
a.	Pre-Assessment of Student Knowledge	• Formally or informally assessed student skills as a baseline for instruction to assist in tailored learning. • Searched for student's understanding and experiences about a concept prior to instruction.	Effective pre-assessment of student knowledge	Needs minor improvement	Little, ineffective, or no pre-assessment conducted		1.b 3.a	4.g	
b.	Student Comprehension	• Formally or informally measured student progress and comprehension using diagnostic, on-the-spot, interim, and/or summative assessments. • Used a variety of methods to check student understanding and learning. • Gave appropriate, prompt, and specific feedback to students in order to reinforce learning or correct misunderstandings.	Effective assessment of student understanding	Needs minor improvement	Little, ineffective, or no assessment conducted				13.h 14.a
c.	Student Involvement	• Monitored student involvement to ensure all students were actively engaged in the learning process.	Actively monitored student involvement	Minor issues	Little or no monitoring of student activity		2.e 2.f	4.a 4.b	13.g 13.i

5. Professional Responsibilities – (Prior Knowledge or Self Assessment only)

	Competency	Evidence of Competency	3	2	1	Rating (1,2,3,NE)
a.	Assessments	• Actively seeks feedback and suggestions from peers and staff uses them to enhance performance. • Conducts periodic self assessments to help identify areas needing improvement. • Uses end-of-course student assessments to gain student feedback. • Proactively uses areas identified in self, student, and staff assessments to improve performance.	Conducts and uses assessments effectively	Needs minor improvement	Assessments not used effectively	
b.	Knowledge Base	• Actively seeks to maintain knowledge base of subject areas included in course content. • Ensures changes are incorporated into course material and instruction.	Maintains and integrates knowledge	Minor issues	Little or no attempt made to update knowledge base	
c.	Professional Development	• Assesses needs for professional growth and participates in professional growth activities. • Incorporates new skills and knowledge gained through professional development to enhance the quality of instruction.	Actively seeks opportunities gain and apply knowledge and skills through professional development	Minor issues	Little or no attention paid to professional development	
d.	Professionalism	• Always presents himself/herself in a professional manner through actions, speech, mannerisms, and all interactions within the classroom. • Displays sound judgment, respects confidentiality, and conducts all actions ethically and honestly.	Professional mannerisms maintained in all aspects of instructor duties	Minor issues	Major issues	

C-6

6. Comments

Competency #	Comment on Competency

APPENDIX D

Validation Material

Academic Instructor Assessment Form Instructions

This Academic Instructor Assessment (AIA) is a tool designed for academic staff members or other designated personnel to use when assessing instructors/facilitators who are facilitating discussion, conducting training, or delivering instruction. It may also be used by instructors/facilitators for conducting a self-assessment to determine ways to enhance their personal performance in the classroom

The form is designed as a tool to help identify instructor/facilitator strengths, and/or areas that need improvement regarding Army doctrine for classroom instructional practices. These areas were identified to increase knowledge, skills, and ultimately benefit the learning experience of students. The form is not only a simple classroom visit checklist. It is intended to be a tool to be used frequently throughout the year by the staff, senior instructors, and the instructor/facilitator him/herself for assessment and professional self- development. As with any tool of this type multiple observations tend to give a more accurate assessment of the overall effectiveness of a particular instructor/facilitator. Multiple assessments that span all different aspects of instruction (e.g. introduction of new material, practical exercises, and student evaluations) are required to obtain an overall picture of an individual instructor/facilitator's behavior. The AIA tool is intended to be useful to instructors/facilitators to assess their own performance and to prioritize goals for ongoing professional development.

The assessment form is divided into six sections. The first four sections contain competencies that cover all aspects of an instructor's/facilitator's performance during a particular block of instruction. Section 5 is to be used only by those who have prior knowledge of an instructor/facilitator's overall behavior or by the instructor/facilitator during a self-assessment. Section 6 contains space to record additional written comments.

Each of the competencies listed in sections 1 through 5 is accompanied by one or more statements describing direct or indirect observable behaviors that are evidence of that particular competency. They are examples, and **therefore are not the only behaviors we would like you to consider when evaluating competencies. Likewise, instructors do not need to exhibit all of the competency examples in order to be rated highly**. Following those statements are three columns that describe, in general terms, the behavior observed by the rater. . Each column is accompanied by an associated numerical rating at the top. Once rater selects a rating for a particular competency, he/she places the appropriate number (1, 2, or 3) in the last column. The assessor may also place a rating of "NA" stating that competency was "Not Assessed" including those that were "Not Applicable" or those that were not observed. A rating of "1" for any competency requires an explanatory comment in section 6 further describing deficiencies or short comings and suggestions for improvement. Explanatory comments may also be written for any competency regardless of the rating.

To use this form assessors should:

1. Identify the type of assessment being conducted and fill out the required administrative information at the top of the form.
2. Review each of the sections and accompanying competencies.
3. For clarification on each competency, refer to the Evidence of Competency statements that give examples of observable behaviors.
4. For each competency, review the rating descriptions and rate each with a 1, 2, 3, or NA by writing the rating into the last column.
5. In section 6, identify a competency by section and letter (e.g. "3.c") for which the assessor wishes to provide further clarification. Describe particular strengths or areas where improvements are needed for that particular competency. A rating of "1" in any of the competencies listed in sections 1 through 5 requires a comment. Other comments are optional including competencies with higher ratings or those labeled "NA".
6. Comply with all rules and regulations regarding privacy and confidentiality and handle the completed assessment accordingly.

ACADEMIC INSTRUCTOR ASSESSMENT

1. Planning and Preparation for Learning

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
a.	Setup/ Classroom Preparation	• Set up classroom prior to class. • Set up classroom for maximum efficiency to facilitate instruction, to include arranging room correctly and ensuring training aids were available.	Failed several aspects of classroom setup	Did not fully prepare classroom in a timely manner	Conducted timely and efficient setup	
b.	Handouts and Other Materials	• Designed supplemental materials with up-to-date information. • Ensured supplemental materials included relevant information, applicable to the instruction presented. • Prepared supplemental materials to aid instruction.	Supplemental materials not applicable, relevant, current, and/or were not used appropriately	Supplemental materials somewhat applicable, relevant, current, and used appropriately	Supplemental materials applicable, relevant, current, and used appropriately	
c.	Knowledge of Content	• Displayed in depth knowledge of course content. • Displayed current knowledge of any changes to subject content. • Mentally retrieved information quickly. • Used up-to-date terminology for each specific subject area.	Demonstrated knowledge gaps; used outdated terminology or content	Some information used was outdated or not easily recalled	Demonstrated current, in depth knowledge of content	

2. Classroom Environment

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
a.	Safety Standards	• Conducted training within safety, comfort, and hygiene standards.	Standards not adhered to	Some standards not completely met	All standards met	
b.	Overall Environment	• Created a positive, supportive, encouraging environment. • Created a classroom environment that facilitated learning for the target audience. • Displayed excitement and motivation toward instruction and content material.	Classroom environment was unexciting, mundane, or non-supportive	Created a fairly positive learning environment	Established a positive, exciting, and encouraging learning environment	
c.	Respect and Rapport	• Established a fair and respectful learning environment. • Created a classroom climate where students were comfortable in sharing ideas. • Ensured respect between instructor and students and among students themselves.	Respect and rapport not maintained in the classroom	Respect and rapport maintained throughout the classroom most of the time	Respect and rapport consistently maintained throughout	

2. Classroom Environment (cont'd)

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
d.	Motivation	• Motivated students while presenting information. • Motivated students to become engaged in active learning by using appropriate instructional methods with relevant content. • Motivated students for subsequent instructional periods via innovative techniques.	Many or most students appeared unmotivated; little or no attempts made to motivate students	Most students appeared motivated; some attempts made to motivate others	Students well motivated; instructor attempted to motivate students not self-motivated	
e.	Discovery Learning Principles	• Implemented techniques and methods that allowed the students to discover learning objectives through exploration (discovery learning). • Ensured learning objectives were accomplished through techniques designed to allow students to derive answers among themselves as opposed to being delivered through a lecture based approach. • Established a spirit of collaborative learning among students. • Shifted responsibility for learning from the instructor to the students; became a facilitator rather than a lecturer.	Discovery learning techniques haphazardly or inappropriately applied, or techniques not attempted at all	Discovery learning techniques attempted or used to some degree with moderate success	Discovery learning techniques thoroughly and successfully applied	
f.	Communication	• Fostered content-related communication and collaboration among the students.	Little or no communication or collaboration among students	Some student communication and/or collaboration witnessed	Students actively communicated and collaborated	
g.	Professional Conduct	• Conducted all instruction and activities in a professional manner. • Used professional verbal and nonverbal mannerisms that were appropriate and mature. • Avoided distracters such as class interruptions from cell phones.	Frequently displayed unprofessional conduct	Some unprofessional conduct witnessed	Professional conduct consistently maintained	

3. Delivery of Instruction

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
a.	Collaborative Learning	• Implemented student-centered instructional activities that allowed for learning to occur among students. • Implemented demonstrations or problem-solving practical exercises that allowed students to discuss solutions and determine answers through exploration and discovery. • Designed student instructional groups to allow learners to work in a climate of collaboration.	Little, poor, or no use of collaborative learning or student-centered instructional activities	Some collaborative learning techniques used; techniques could be implemented more effectively	Effectively used collaborative learning techniques	

3. Delivery of Instruction (cont'd)

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
b.	Critical Thinking, Problem Solving	• Facilitated opportunities for students to use critical thinking skills by use of select instructional methods and activities. • Placed students in situations to challenge their conceptions, create contradictions, and promote problem solving skills.	Instruction did not foster or create opportunities for students to use critical thinking or problem solving skills	Instruction occasionally fostered critical thinking and problem solving skills	Instruction effectively included opportunities that fostered critical thinking and problem solving skills	
c.	Job Application Relationship	• Demonstrated application, relevancy, and relationship of lesson content to students' jobs or work environments. • Presented practical exercises and discussions in context of job related events and real world situations.	Little or no relationship demonstrated between the lesson content and the job or real world situations	Lesson content occasionally or mildly linked to job or real world application	Instruction clearly linked the application of lesson content to job or real world situations	
d.	Knowledge Transfer	• Implemented practical exercises (PEs) that promoted the transfer of a student's current and new knowledge to new situations.	PEs were not used to promote the transfer of knowledge to new situations	PEs had some potential to promote the transfer of knowledge with limited success	PEs used effectively to promote the transfer of knowledge to new situations	
e.	Questioning Techniques	• Asked thoughtful, open-ended questions that encouraged critical thinking. • Asked follow-up questions for elaboration and clarification after a student's initial response. • Turned questions back to the students rather than giving a direct answer. • Required students to explain why they believed a particular answer was correct. • Allowed time after asking a question for students to reflect, think, and respond.	Did not use effective questioning techniques, allow ample reflection time for responses, and/ or ask follow-up questions	Questioning techniques used, but not always effectively; asked questions with simple answers rather than questions that required critical thinking	Effective questioning techniques consistently used	
f.	Discussions	• Allowed students freedom to discover knowledge while effectively steering the focus of discussions toward course objectives when discussions got off-track. • Encouraged discussions of differing opinions and alternate solutions. • Effectively introduced overlooked data, different perspectives, and learning points into discussions when necessary. • Effectively encouraged student discussions and opinions without allowing one student to dominate.	Failed to provoke meaningful discussions; did not monitor and guide discussions in order to maintain a focus on course objectives	Moderately effective discussion techniques; discussion not always encouraged or refocused when appropriate	Effective discussion techniques consistently used to encourage meaningful student discussions; effectively refocused discussions when necessary	

3. Delivery of Instruction (cont'd)

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
g.	Use of Technology	• Implemented technology into the classroom to enhance student learning. • Demonstrated appropriate knowledge of technical equipment and software that was incorporated into classroom events. • Innovatively used technology to appropriate degrees to enhance the learning experience. • Used technology seamlessly without detracting from the learning environment.	Little, poor, or no use of technology	Some use of technology, but not in the most effective or appropriate manner	Productive, innovative, and applicable technology used	
h.	Instructional Methods	• Adapted instructional strategies using a variety of concepts and instructional techniques suitable for adult learners. • Delivered the course content using a variety of instructional methods suited for the course content. • Adopted broad use of facilitation methods for content delivery as opposed to lecture based instruction (when applicable).	Poorly used facilitation or other instructional techniques suitable for adult learners; made wide use of lecture based instruction	Instructional strategies included some variety of techniques with moderate success	Effectively used various instructional techniques suitable for adult learners	
i.	Verbal / Non-Verbal Communication	• Used appropriate verbal and nonverbal communication techniques that encouraged students to engage in the learning process. • Avoided inappropriate or distracting verbal and non-verbal mannerisms.	Verbal and/or nonverbal mannerisms were regularly distracting or hindered learning	Verbal and/or nonverbal mannerisms were sometimes distracting or hindered learning	Appropriately used verbal / non-verbal communication techniques	
j.	Tailored Learning	• Adapted lesson presentation to account for students' prior knowledge and experiences	Little or no adaptation made	Moderate adaptation made	Effectively adapted the presentation to account for students' prior knowledge	
k.	Student Mistakes	• Used methods, such as discussions, to examine appropriate solutions rather than directly correcting wrong answers. • Effectively used student mistakes as a positive learning tool.	Improper, poor or no response to student mistakes; students were not aided in learning from mistakes	Limited use of student mistakes as a learning opportunity	Effectively used student mistakes; respectfully helped students identify and learn from mistakes	
l.	Time Management	• Structured the instruction of course content to meet course objectives within the allotted time. • Allotted appropriate time for each instructional method used (e.g. giving too much or too little time to conduct a practical exercise or for discussions on a particular topic).	Lesson not efficiently planned or executed in the time allotted	Some lesson components allotted too much or too little time	Efficiently used time for each portion of the lesson	

4. Assessment and Monitoring

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
a.	Pre-Assessment of Student Knowledge	• Formally or informally assessed students' skills as a baseline to assist in tailored learning. • Inquired about students' understanding and experiences prior to instruction.	Little, ineffective, or no pre-assessment conducted	Some attempt made to assess student knowledge	Effective pre-assessment of student knowledge conducted	
b.	Student Comprehension	• Formally or informally measured students' progress and comprehension using summative and formative assessments. • Employed a variety of methods to check student understanding and learning. • Gave appropriate, prompt, and specific feedback to students in order to reinforce learning or correct misunderstandings.	Little, ineffective, or no assessment conducted to check student understanding	Some attempts made to assess student comprehension with limited success	Effective techniques used to consistently assess student understanding	
c.	Student Involvement	• Monitored student involvement to ensure all students were actively engaged in the learning process (e.g. noting students' non participation and attempting to involve them in a discussion or questioning their understanding).	Little or no monitoring of student engagement or activity	Casually monitored student involvement; limited attempts to involve reluctant students	Actively monitored student involvement and attempted to actively engage all students	

5. Continuing Professional Responsibilities – (Prior Knowledge or Self Assessment only)

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
a.	Assessments	• Actively seeks feedback from peers and staff and uses feedback to enhance performance. • Conducts periodic self-assessments to help identify areas needing improvement. • Uses end-of-course student assessments/feedback to enhance performance. • Proactively uses areas identified in self, student, and staff assessments to improve performance.	Assessments not used effectively to improve performance	Assessments used moderately; sought feedback at times; feedback not always used constructively	Conducts and uses feedback and assessments effectively	
b.	Knowledge Base	• Actively seeks to maintain knowledge base of subject areas included in course content. • Ensures changes are incorporated into course material and instruction.	Little or no attempt made to incorporate new material or update knowledge base	Usually incorporates changes to material; maintains adequate knowledge base	Constantly seeks new information and updates to integrate into course material; aggressively seeks to maintain knowledge base	

5. Continuing Professional Responsibilities (cont'd)

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
c.	Professional Development	• Assesses needs for professional growth and participates in professional growth activities. • Incorporates new skills and knowledge gained through professional development to enhance the quality of instruction.	Little or no attention paid to professional development	Attempts professional development at times, with varying degree of success	Actively seeks opportunities gain and apply knowledge and skills through professional development	
d.	Professionalism	• Presents himself/herself in a professional manner through actions, speech, mannerisms, and all interactions within the classroom. • Displays sound judgment, respects confidentiality, and conducts all actions ethically and honestly.	Several significant departures from professional conduct	Some minor departures from professional conduct, no major issues	Professional mannerisms maintained in all aspects of instructor duties	

6. Comments

Competency #	Comment on Competency

Instructions for Instructors

Your role: Instructor Only

For this project, you will be asked to evaluate a new instructor assessment tool, the Academic Instructor Assessment (AIA), incorporating new Army Learning Model instructional characteristics. **This project is to assess the newly developed form; the intent of this project is evaluate the form itself, not make an assessment of how well any particular instructor (or group of instructors) perform.** First, you will instruct a block of instruction as normal for either the Warrant Officer Staff Course or the Warrant Officer Senior Staff Course. WOCC personnel normally involved in instructor evaluation who have agreed to participate in this research will observe you during one of your regularly scheduled blocks of instruction. Over the course of the project, you may have several individuals observe you during your course. After the *first* observation, please complete a self-assessment of your instruction during the observed period using the Academic Instructor Assessment Form.

Academic Instructor Assessment
New form
6 pages, plus cover sheet

After completing the AIA on your own instruction, you will then complete a validity questionnaire to assess (1) the user-friendliness of the new AIA form and (2) the degree to which the AIA form assesses Army Learning Model instructional characteristics.

Validity Questionnaire for new form AIA

Questionnaire #2 – Proposed Academic Instructor Assessment

This survey asks your opinion of the assessment form concerning its format, ease of use, and its ability to allow an assessor to quantify use of Army Learning Model (ALM)/Army Learning Concept (ALC) 2015 concepts. In other words, in addition to ease of use, how well does this form allow the person using it to record how much a particular concept is being used in the classroom? Please read and respond to each of the questions below.

How **user friendly** was this form in relation to the following factors? (Place an X in the appropriate box for each line.)

	Form Structure	Very Difficult	Difficult	Average	Easy	Very Easy
1	Overall format					
2	Easy to understand					
3	Category grouping of similar items					
4	Organization of topics					
5	Size and clarity of the rating scale					
6	Clarity of concepts, terms, and descriptions					

How well did the form **allow you to assess the instructor's performance** in relation to the following ALC 2015 and adult learning theory concepts? (Place an X in the appropriate box for each line.)

	Concept	Not at all	Slightly	Moderately	Very Well	Extremely Well
1	Assess the instructor's ability to create a collaborative learning environment					
2	Assess the instructor's ability to activate students' prior knowledge in order to promote learning					
3	Assess the instructor's ability to tailor the learning experience to prior student knowledge					
4	Assess the instructor's ability to serve as a learning facilitator (guide-on-the-side versus sage-on-the-stage)					
5	Assess the instructor's ability to promote discovery learning (versus lecture based delivery of material)					
6	Assess the instructor's incorporation of technology in the classroom					
7	Assess the instructor's ability to promote critical thinking and incorporate problem solving techniques					
8	Assess the instructor's ability to utilize discussion techniques					
9	Assess the instructor's ability to relate the instructional content to the students' work environment and mission					
10	Assess the instructor's use of blended learning (multiple instructional delivery techniques)					
11	Assess the instructor's ability to create a positive, supportive, encouraging learning environment					

After you complete the self-assessment and the self-assessment validation questionnaire, please put all forms and these instructions with your record of who and when you made your observations in your envelope, seal it, and place it in the black locked box in a location designated by Mr. Joe Craig. Additional observers may observe you after you complete the forms. You do not need to complete these forms more than once. The research team will collect the packets at the end of each course.

The following items should be included in the envelope when you return it:

_____ 1 completed self-assessment of the Academic Instructor Assessment
_____ 1 completed validity questionnaire for the proposed Academic Instructor Assessment
_____ 1 Completed Consent to Use Assessment Form(s) for Required WOCC Quarterly Evaluation
_____ These instructions

If you have any questions at any time, please contact the research team:

Dr. Marisa Miller   Mr. Gary Stallings
U.S. Army Research Institute   Northrop Grumman
Ft. Benning, GA   Columbus, GA
(706) 545-2450   (706) 565-1823
Marisa.L.Miller6.civ@mail.mil   Gary.Stallings.ngc@gmail.com

Thank you for participating in this project!

Instructions for Observers

Your role: Observer Only

For this project, you will be asked to evaluate a new instructor assessment tool, the Academic Instructor Assessment (AIA), incorporating new Army Learning Model instructional characteristics. **This project is to assess the newly developed form; the intent of this project is evaluate the form itself, not make an assessment of how well any particular instructor (or group of instructors) perform.** In total, you will observe three separate blocks of instruction of the Warrant Officer Staff Course or the Warrant Officer Senior Staff Course. After each observation period you will then be asked to assess the instructor you observed using two instructor assessment forms: (1) the existing instructor assessment form, USAAWC (G-3) Form 1152a-R and (2) the newly developed AIA. You will complete each form for each of three observations, meaning you will complete each form a total of three times.

Academic Instructor Assessment	Form 1152a-R
New form	Old form
6 pages, plus cover sheet	2 pages

Of the people who agreed to participate in this study, please observe the following 3 individuals and record the date and time that you observed them:

	Instructor to Observe	Course	Date Observed	Time Observed
1				
2				
3				

The courses that are under observation are the Warrant Officer Staff Course (courses #504 and 001) and the Warrant Officer Senior Staff Course. The start and end date for these courses are below:

Course	Course #	Start	End
WOSC	504	6 Sep	11 Oct
WOSC	0001	2 Oct	6 Nov
WOSSC		15 Oct	9 Nov

The instructor schedules for each of these courses are available either in this packet or through Mr. Joe Craig or Mr. Lon Flurer. You may do these observations at your leisure. No more than two observers should observe the same instructor at the same time. You should conduct these observations within the guidelines given to you by the on-site POC Mr. Craig. You will receive emails from the research team reminding you to complete the observations. We suggest conducting the observations sooner rather than later.

After completing your third observation and the third use of Form 1152a-R and the AIA, we would like feedback from you regarding (1) the user-friendliness of the new AIA form compared to the old 1152a-R form and (2) the degree to which the AIA form versus the 1152a-R form assesses Army Learning Model instructional characteristics. To obtain this feedback, we are including two 16 question surveys, shown below. Only one validity survey for the 1152a-R and one validity survey for the proposed AIA is to be filled out per observer.

Survey for old form 1152a-R

Survey for new from AIA

After you complete these two surveys, please put all forms and these instructions with your record of who and when you made your observations in your envelope, seal it, and place it in the black locked box in a location designated by Mr. Joe Craig. The research team will collect all packets at the end of each course.

The following items should be included in the envelope when you return it:

_____ 3 completed Academic Instructor Assessments (on first, second, and third instructors)
_____ 3 completed Forms 1152a-R (on first, second, and third instructors)
_____ 1 completed validity questionnaire for the proposed Academic Instructor Assessment
_____ 1 completed validity questionnaire for Form 1152a-R
_____ These instructions with the record of who you observed and when you completed your observations

If you have any questions at any time, please contact the research team:

Dr. Marisa Miller
U.S. Army Research Institute
Ft. Benning, GA
(706) 545-2450
Marisa.L.Miller6.civ@mail.mil

Mr. Gary Stallings
Northrop Grumman
Columbus, GA
(706) 565-1823
Gary.Stallings.ngc@gmail.com

Thank you for participating in this project!

Instructions for Observer-Instructors

Your role: Observer and Instructor

For this project, you will be asked to evaluate a new instructor assessment tool, the Academic Instructor Assessment (AIA), incorporating new Army Learning Model instructional characteristics. **This project is to assess the newly developed form; the intent of this project is evaluate the form itself, not make an assessment of how well any particular instructor (or group of instructors) perform.**

You have agreed to participate both as an observer and as an instructor.

As an **observer,** in total, you will observe three separate blocks of instruction of the Warrant Officer Staff Course or the Warrant Officer Senior Staff Course. After each observation period you will then be asked to assess the instructor you observed using two instructor assessment forms: (1) the existing instructor assessment form, USAAWC (G-3) Form 1152a-R and (2) the newly developed AIA. You will complete each form for each of three observations, meaning you will complete each form a total of three times.

Academic Instructor Assessment	Form 1152a-R
New form	Old form
6 pages, plus cover sheet	2 pages

Of the people who agreed to participate in this study, please observe the following 3 individuals and record the date and time that you observed them:

	Instructor to Observe	Course	Date Observed	Time Observed
1				
2				
3				

The courses that are under observation are the Warrant Officer Staff Course (courses #504 and 001) and the Warrant Officer Senior Staff Course. The start and end date for these courses are below:

Course	Course #	Start	End
WOSC	504	6 Sep	11 Oct
WOSC	001	2 Oct	6 Nov
WOSSC		15 Oct	9 Nov

The instructor schedules for each of these courses are available either in this packet or through Mr. Joe Craig or Mr. Lon Flurer. You may do these observations at your leisure. No more than two observers should observe the same instructor at the same time. You should conduct these observations within the guidelines given to you by the on-site POC Mr. Craig. You will receive emails from the research team reminding you to complete the observations. We suggest conducting the observations sooner rather than later.

 After completing your third observation and the third use of Form 1152a-R and the AIA, we would like feedback from you regarding (1) the user-friendliness of the new AIA form compared to the old 1152a-R form and (2) the degree to which the AIA form versus the 1152a-R form assesses Army Learning Model instructional characteristics. To obtain this feedback, we are including two 16 question surveys, shown below. Only one validity survey for the 1152a-R and one validity survey for the proposed AIA is to be filled out per observer.

Survey for old form 1152a-R | Survey for new from AIA

As an **instructor,** you will instruct a block of instruction as normal for either the Warrant Officer Staff Course or the Warrant Officer Senior Staff Course. WOCC personnel normally involved in instructor evaluation who have agreed to participate in this research will observe you during one of your regularly scheduled blocks of instruction. Over the course of the project, you may have several individuals observe you during your course. After the *first* observation, please complete a self-assessment of your instruction during the observed period using the Academic Instructor Assessment Form.

Academic Instructor Assessment
New form
6 pages, plus cover sheet

After completing the AIA on your own instruction, you will then complete a validity questionnaire to assess the degree to which the AIA form assesses Army Learning Model instructional characteristics. **You do not need to complete the first six items on this form. Although you will have completed this form as an observer, please complete the second box regarding how well the AIA allows you to assess your own performance on the concepts listed.**

Validity Questionnaire for new form AIA

Do not complete this top portion. ⟹

DO complete this bottom portion. ⟹

After you complete the three observations, the two observer validation questionnaires, the self-assessment and the self-assessment validation questionnaire, please put all forms and these instructions with your record of who and when you made your observations in your envelope, seal it, and place it in the black locked box in a location designated by Mr. Joe Craig. The research team will collect all packets at the end of each course.

The following items should be included in the envelope when you return it:

_____ 3 completed Academic Instructor Assessments (on first, second, and third instructors)
_____ 3 completed Forms 1152a-R (on first, second, and third instructors)
_____ 1 completed validity questionnaire for the proposed Academic Instructor Assessment **as an observer tool**
_____ 1 completed validity questionnaire for Form 1152a-R **as an observer tool**
_____ 1 completed self-assessment of the Academic Instructor Assessment
_____ 1 completed validity questionnaire for the proposed Academic Instructor Assessment **as a self-Assessment tool** (only the bottom set of questions)
_____ 1 Completed Consent to Use Assessment Form(s) for Required WOCC Quarterly Evaluation
_____ These instructions with the record of who you observed and when you completed your observations

If you have any questions at any time, please contact the research team:

Dr. Marisa Miller
U.S. Army Research Institute
Ft. Benning, GA
(706) 545-2450
Marisa.L.Miller6.civ@mail.mil

Mr. Gary Stallings
Northrop Grumman
Columbus, GA
(706) 565-1823
Gary.Stallings.ngc@gmail.com

Thank you for participating in this project!

Academic Instructor Assessment Form Administrative Data
(Instructors)

*To be completed at the conclusion of the first observation conducted on you as an instructor.

Instructor's Name: _____

Instructor's Rank: _____

Date: _____   Time:_____

Course: - Check one:

☐ WOSC – Course # 504	☐ WOSC – Course # 001	☐ WOSSC

Instructor's Academic Department:_____

☐ Active Duty	☐ Reserve	☐ Civilian	☐ Contractor

Academic Instructor Assessment Form Administrative Data (Observers)

Instructor's Name: _____

Instructor's Rank: _____

Date: _____   Time:_____

Course: - Check one:

☐ WOSC – Course # 504	☐ WOSC – Course # 001	☐ WOSSC

Instructor's Academic Department:_____

Observer's Name: _____

Observer's Rank: _____

Observer's Position: _____

Observer's Academic Department:_____

Observer's status - Check one:

☐ Active Duty	☐ Reserve	☐ Civilian	☐ Contractor

Questionnaire #1 – Academic Instructor Evaluation Checklist – Form 1152a-R

This survey asks your opinion of the assessment form concerning its format, ease of use, and its ability to allow an assessor to quantify use of Army Learning Model (ALM)/Army Learning Concept (ALC) 2015 concepts. In other words, in addition to ease of use, how well does this form allow the person using it to record how much a particular concept is being used in the classroom? Please read and respond to each of the questions below.

How **user friendly** was this form in relation to the following factors?   (Place an X in the appropriate box for each line.)

	Form Structure	Very Difficult	Difficult	Average	Easy	Very Easy
1	Overall format					
2	Easy to understand					
3	Category grouping of similar items					
4	Organization of topics					
5	Size and clarity of the rating scale					
6	Clarity of concepts, terms, and descriptions					

How well did the form **allow you to assess the instructor's performance** in relation to the following ALC 2015 and adult learning theory concepts? (Place an X in the appropriate box for each line)

	Concept	Not at all	Slightly	Moderately	Very Well	Extremely Well
1	Assess **the instructor's ability to create a collaborative learning environment**					
2	Assess **the instructor's ability to activate students' prior knowledge in order to promote learning**					
3	Assess **the instructor's ability to tailor the learning experience to prior student knowledge**					
4	Assess **the instructor's ability to serve as a learning facilitator (guide-on-the-side versus sage-on-the-stage)**					
5	Assess **the instructor's ability to promote discovery learning (versus lecture based delivery of material)**					
6	Assess **the instructor's incorporation of technology in the classroom**					
7	Assess **the instructor's ability to promote critical thinking and incorporate problem solving techniques**					
8	Assess **the instructor's ability to utilize discussion techniques**					
9	Assess **the instructor's ability to relate the instructional content to the students' work environment and mission**					
10	Assess **the instructor's use of blended learning (multiple instructional delivery techniques)**					
11	Assess **the instructor's ability to create a positive, supportive, encouraging learning environment**					

Questionnaire #2 – Proposed Academic Instructor Assessment

This survey asks your opinion of the assessment form concerning its format, ease of use, and its ability to allow an assessor to quantify use of Army Learning Model (ALM)/Army Learning Concept (ALC) 2015 concepts. In other words, in addition to ease of use, how well does this form allow the person using it to record how much a particular concept is being used in the classroom? Please read and respond to each of the questions below.

How **user friendly** was this form in relation to the following factors?   (Place an X in the appropriate box for each line.)

	Form Structure	Very Difficult	Difficult	Average	Easy	Very Easy
1	Overall format					
2	Easy to understand					
3	Category grouping of similar items					
4	Organization of topics					
5	Size and clarity of the rating scale					
6	Clarity of concepts, terms, and descriptions					

How well did the form **allow you to assess the instructor's performance** in relation to the following ALC 2015 and adult learning theory concepts? (Place an X in the appropriate box for each line.)

	Concept	Not at all	Slightly	Moderately	Very Well	Extremely Well
1	Assess **the instructor's ability to create a collaborative learning environment**					
2	Assess **the instructor's ability to activate students' prior knowledge in order to promote learning**					
3	Assess **the instructor's ability to tailor the learning experience to prior student knowledge**					
4	Assess **the instructor's ability to serve as a learning facilitator (guide-on-the-side versus sage-on-the-stage)**					
5	Assess **the instructor's ability to promote discovery learning (versus lecture based delivery of material)**					
6	Assess **the instructor's incorporation of technology in the classroom**					
7	Assess **the instructor's ability to promote critical thinking and incorporate problem solving techniques**					
8	Assess **the instructor's ability to utilize discussion techniques**					
9	Assess **the instructor's ability to relate the instructional content to the students' work environment and mission**					
10	Assess **the instructor's use of blended learning (multiple instructional delivery techniques)**					
11	Assess **the instructor's ability to create a positive, supportive, encouraging learning environment**					

Questionnaire #2 – Proposed Academic Instructor Assessment

This survey asks your opinion of the assessment form concerning its format, ease of use, and its ability to allow an assessor to quantify use of Army Learning Model (ALM)/Army Learning Concept (ALC) 2015 concepts. In other words, in addition to ease of use, how well does this form allow the person using it to record how much a particular concept is being used in the classroom? Please read and respond to each of the questions below.

How **user friendly** was this form in relation to the following factors?   (Place an X in the appropriate box for each line.)

	Form Struc...	Very Difficult	Diff...			Very Easy
1	Overall format					
2	Easy to understand					
3	Category grouping of similar...					
4	Organization of topi...					
5	Size and cl...					
6	Cl... ...ons					

How well did the form **allow you to assess <u>your own</u> performance** in relation to the following ALC 2015 and adu... learning theory concepts? (Place an X in the appropriate box for each line.)

	Concept	Not at all	Slightly	Moderately	Very Well	Extremely Well
1	Assess **the instructor's ability to create a collaborative learning environment**					
2	Assess **the instructor's ability to activate students' prior knowledge in order to promote learning**					
3	Assess **the instructor's ability to tailor the learning experience to prior student knowledge**					
4	Assess **the instructor's ability to serve as a learning facilitator (guide-on-the-side versus sage-on-the-stage)**					
5	Assess **the instructor's ability to promote discovery learning (versus lecture based delivery of material)**					
6	Assess **the instructor's incorporation of technology in the classroom**					
7	Assess **the instructor's ability to promote critical thinking and incorporate problem solving techniques**					
8	Assess **the instructor's ability to utilize discussion techniques**					
9	Assess **the instructor's ability to relate the instructional content to the students' work environment and mission**					
10	Assess **the instructor's use of blended learning (multiple instructional delivery techniques)**					
11	Assess **the instructor's ability to create a positive, supportive, encouraging learning environment**					

Proposed End-of-Course Assessment

ALM End-of-course Form

1. Overall, how well do you think WOSSC instructors served as facilitators of learning who asked probing questions, encouraged content related discussions, and encouraged students to discover answers on their own using various techniques rather than dominating the class with lecture based delivery of material? Specifically, how well did instructors do each of the following?

	Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
a	Were facilitators as opposed to lecturers?	Poor use of facilitation or other instructional techniques suitable for adult learners; wide use of lecture based instruction	Made use of facilitator instructional strategies with moderate success but room for improvement	Effectively facilitated learning rather than lectured	
b	Encouraged content related discussions?	Failed to provoke meaningful discussions; did not monitor and guide discussions in order to maintain a focus on course objectives	Moderately effective discussion techniques, discussion not always encouraged or refocused when appropriate	Effective discussion techniques consistently used to encourage meaningful student discussions; effectively refocused discussions when necessary	
c	Provided for learning through discovery rather than simply stating or relating content?	Discovery learning techniques haphazardly or inappropriately applied or techniques not attempted at all	Discovery learning techniques attempted or used to some degree with moderate success	Discovery learning techniques thoroughly and successfully applied	

2. Do you have any suggestions for how WOSSC instructors might have more effectively served as facilitators and incorporated the concepts listed in question 1 above? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question:

3. Do you think the WOSSC accounted for (considered, showed an awareness of) your existing experience level during delivery of instructional material?

	Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
a	Accounted for (considered, showed an awareness of) my existing experience level during delivery of instructional material	Little or no consideration for my knowledge or experience	Moderate consideration made for my knowledge or experience	Substantial consideration given to my experience and prior knowledge during presentation of material	

4. Do you have any suggestions for how WOSSC might have more effectively accounted for your experience? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question:

[text block]

5. Overall, how well do you think WOSSC instructors introduced collaborative learning, problem solving, and critical thinking concepts into their lesson presentation. Specifically, **using the box below**, how well did instructors:

a. Provide opportunities for students to interact with other students in collaborative environments?
b. Use problem solving exercises to enhance or deliver learning concepts?
c. Create situations and exercises that encouraged students to learn through application of critical thinking skills to discover answers?

	Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
a.	Provide opportunities for students to interact with other students in collaborative environments	Little, poor or no use of collaborative learning or student-centered instructional activities	Some collaborative learning techniques used; techniques could be implemented more effectively	Effective use of collaborative learning techniques	
b.	Used problem solving exercises to enhance or deliver learning concepts?	Instruction did not foster or create opportunities for students to use problem solving	Instruction occasionally fostered problem solving	Instruction effectively included opportunities that fostered problem solving	
c.	Created situations that required application of critical thinking skills?	Instruction did not foster or create opportunities for students to use critical thinking	Instruction occasionally fostered critical thinking	Instruction effectively included opportunities that fostered critical thinking	

6. Do you have any suggestions for how WOSSC instructors might have more effectively employed the techniques listed in question 5 above? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question.

7. Overall, how well do you think WOSSC instructors incorporated modern technology into the classroom in innovative ways to boost the learning experience and reduce the learning time while maintaining learning effectiveness?

	Competency	1 Needs Major Improvement	2 Minor Issues	3 Very Well Done	Rating (1,2,3,NA)
g.	Incorporated modern technology into the classroom in innovative ways to boost the learning experience and reduce the learning time while maintaining learning effectiveness?	Little, poor or no use of technology	Some use of technology, but not in the most effective or appropriate manner	Productive, innovative and applicable use of technology	

8. Do you have any suggestions for how WOSSC instructors might have more effectively employed the use of technology as listed in question 7 above? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question.

Proposed End-of-course Assessment Validation Questionnaire

The following survey is designed to capture your opinion of the content questions in the WOSC and WOSSC EOC Surveys as related to Army Learning Model (ALM)/Army Learning Concept (ALC) 2015 concepts in the classroom. In other words, how well do the EOC Survey questions capture the essence ALM/ALC 2015 concepts and are those questions described in verbiage that allows the person using it to record impressions relating to a particular concept?

(Place an X in the appropriate box for each line)

Concept		Not at all	Slightly	Moderately	Very Well	Extremely Well
In relation to WOCS and WOSSC EOC Surveys:						
	How well does the form allow a student to convey impressions of their classroom training in relation to the following ALM/ALC 2015 concepts and adult learning theory?					
a	Creation of a collaborative learning environment?					
b	Tailoring the learning experience to prior student knowledge?					
c	Instructors serving as a learning facilitator (guide-on-the-side versus sage-on-the-stage)?					
d	Use of discovery learning techniques (versus lecture-based delivery of material)?					
e	Incorporation of technology in the classroom?					
f	Use of critical thinking and problem solving techniques?					
g	Use of discussion techniques?					
	Were the form's questions stated in terms that students not familiar with ALM/ALC 2015 concepts or adult learning theory could easily understand and answer?					
	Are the questions that relate to ALM/ALC 2015 appropriate and adequate to cover the major concepts?					
	Use the space below to further explain any "No" answers from the questions above.					

Consent to Use Instructor Assessment Form(s) for
Required WOCC Quarterly Evaluation

In order to reduce duplication of effort within the WOCC, you may elect to have these assessments count as your required quarterly evaluation. Please indicate below which assessment(s) you wish to be included. The information on the ones selected will be shared with applicable WOCC senior staff personnel.

I consent to have the following assessments included as part of my file for my required quarterly assessment.

Academic Instructor Evaluation Checklist (old form) USAAWC (G-3) FORM 1152a-R	☐ Yes		☐ No
Proposed Academic Instructor Assessment (new form)	☐ Yes		☐ No

Instructor's Name: _____

Instructor's Rank: _____

Date: _____

Instructor's Signature: _____

Academic Instructor Assessment Form Instructions

This Academic Instructor Assessment (AIA) is a tool designed for academic staff members or other designated personnel to use when assessing instructors who are facilitating discussion, conducting training, or delivering instruction. It may also be used by instructors for conducting a self-assessment to determine ways to enhance their personal performance in the classroom. In this document, the term "instructor" refers to an all inclusive role of instructor/ facilitator rather than the more narrowly defined role of presenter/ lecturer.

The form is designed as a tool to help identify instructor strengths, and/or areas that need improvement regarding Army doctrine for classroom instructional practices. These areas were identified to increase knowledge, skills, and ultimately benefit the learning experience of students. The form is not simply a classroom visit checklist. It is intended to be a tool to be used frequently throughout the year by the staff, senior instructors, and the instructor him/herself for assessment and professional self- development. As with any tool of this type, multiple observations tend to give a more accurate assessment of the overall effectiveness of a particular instructor. Multiple assessments that span all different aspects of instruction (e.g. introduction of new material, practical exercises, and student evaluations) are required to obtain an overall picture of an individual instructor's behavior. The AIA tool is intended to be useful to instructors to assess their own performance and to prioritize goals for ongoing professional development.

The assessment form is divided into six sections. The first four sections contain competencies that cover all aspects of an instructor's performance during a particular block of instruction. Section 5 is to be used only by those who have prior knowledge of an instructor's overall behavior or by the instructor during a self-assessment. At the end of each section, space is provided to record additional written comments. The final sixth section at the end of the form allows users to include any overall comments not specific to a particular instructional domain.

Each competency listed in sections 1 through 5 is accompanied by one or more statements describing direct or indirect observable behaviors that are evidence of that particular competency. They are examples, and **therefore are not the only behaviors we would like you to consider when evaluating competencies. Likewise, instructors do not need to exhibit all of the competency examples in order to be rated highly**. Following those statements are four columns that describe, in general terms, the behavior observed by the rater. Each column is accompanied by an associated numerical rating at the top. Once the rater selects a rating for a particular competency, he/she places the appropriate number (1, 2, 3, or 4) in the last column. The rater may also place a rating of "NA" stating that competency was "Not Assessed" including those that were "not applicable" or those that were not observed. A rating of "1" for any competency requires an explanatory comment in the comment blocks below each section further describing deficiencies or short comings and suggestions for improvement. Explanatory comments may also be written for any competency regardless of the rating. A rating of "1" is considered unacceptable. A rating of "2" is minimally acceptable, a rating of "3" is a good performer, and a rating of "4" is considered truly exceptional. Most good performers will receive a "3" rating and this rating should be considered a good score. "4" ratings should be used rarely except when truly deserved.

To use this form assessors should:

7. Identify the type of assessment being conducted and fill out the required administrative information at the top of the form.
8. Review each of the sections and accompanying competencies.
9. For clarification on each competency, refer to the Evidence of Competency statements that give examples of observable behaviors.
10. For each competency, review the rating descriptions and rate each with a 1, 2, 3, 4, or NA by writing the rating into the last column.
11. In the comment blocks below each section, identify a competency by section and letter (e.g. "3.c") for which the rater wishes to provide further clarification. Describe particular strengths or areas where improvements are needed for that particular competency. A rating of "1" in any of the competencies listed in sections 1 through 5 requires a comment. Other comments are optional including competencies with higher ratings or those labeled "NA".
12. Comply with all rules and regulations regarding privacy and confidentiality, and handle the completed assessment accordingly.

ACADEMIC INSTRUCTOR ASSESSMENT

1. Planning and Preparation for Learning

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Setup/ Classroom Preparation	• Set up classroom prior to class. • Set up classroom for maximum efficiency to facilitate instruction, to include arranging room correctly and ensuring training aids were available.	Failed several aspects of classroom setup	Prepared classroom, but not in a very timely or efficient manner	Setup classroom timely and efficiently	Conducted exceptional classroom setup and preparation	
b.	Handouts and Other Materials	• Designed supplemental materials with up-to-date information. • Ensured supplemental materials included relevant information, applicable to the instruction presented. • Prepared supplemental materials to aid instruction.	Used non-applicable, non-relevant, outdated, and/or inappropriate supplemental materials	Used somewhat applicable, relevant, current, and appropriate supplemental materials	Used applicable, relevant, current, and appropriate supplemental materials	Exceptionally used handouts or other supplemental materials to enhance learning	
c.	Knowledge of Content	• Displayed in depth knowledge of course content. • Displayed current knowledge of any changes to subject content. • Mentally retrieved information quickly. • Used up-to-date terminology for each specific subject area.	Demonstrated knowledge gaps; used outdated terminology or content	Used some outdated or not easily recalled information	Demonstrated current knowledge of content	Demonstrated extremely thorough, in depth knowledge of content	

Competency #	Section 1 Comments

2. Classroom Environment

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Safety Standards	• Conducted training within safety, comfort, and hygiene standards.	Did not adhere to safety standards	Adhered to most standards but not completely	Met all safety standards	Took exceptional steps to ensure safety	
b.	Overall Environment	• Created a positive, supportive, encouraging environment. • Created a classroom environment that facilitated learning for the target audience. • Displayed excitement and motivation toward instruction and content material.	Created an unexciting, mundane, or non-supportive classroom environment	Created a fairly positive learning environment	Created a positive learning environment	Created an extremely positive, encouraging and exciting learning environment	

2. Classroom Environment (cont'd)

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
c.	Respect and Rapport	• Established a fair and respectful learning environment. • Created a classroom climate where students were comfortable in sharing ideas. • Ensured respect between instructor and students and among students themselves.	Did not maintain respect and rapport in the classroom	Maintained respect and rapport throughout the classroom most of the time	Maintained respect and rapport throughout the classroom	Established an atmosphere where respect and rapport was strongly encouraged and consistently maintained by all	
d.	Motivation	• Motivated students while presenting information. • Motivated students to become engaged in active learning by using appropriate instructional methods with relevant content. • Motivated students for subsequent instructional periods via innovative techniques.	Made little or no attempt to motivate students; many or most students appeared unmotivated	Made some attempts to motivate students; most students appeared motivated	Attempted to motivate students not self-motivated; students appeared well motivated	Effectively maintained high levels of motivation in all students	
e.	Discovery Learning Principles	• Implemented techniques and methods that allowed the students to discover learning objectives through exploration (discovery learning). • Ensured learning objectives were accomplished through techniques designed to allow students to derive answers among themselves as opposed to being delivered through a lecture based approach. • Established a spirit of collaborative learning among students. • Shifted responsibility for learning from the instructor to the students; became a facilitator rather than a lecturer.	Haphazardly or inappropriately applied discovery learning techniques, or techniques not attempted at all	Attempted or used some discovery learning techniques to various degrees with moderate success	Applied discovery learning techniques successfully	Displayed exceptional knowledge and thoroughly used discovery learning principles and techniques	
f.	Communication	• Fostered content-related communication and collaboration among the students.	Fostered little or no communication or collaboration among students	Fostered some student communication and/or collaboration	Fostered communication and collaboration among students	Fostered exceptional communication and collaboration consistently	
g.	Classroom Conduct	• Conducted and maintained all instruction and activities in an appropriate, professional manner. • Maintained appropriate and mature verbal and nonverbal mannerisms. • Avoided distracters such as class interruptions from cell phones.	Frequently allowed inappropriate classroom conduct	Occasionally allowed inappropriate classroom conduct	Enforced appropriate classroom conduct	Consistently maintained exceptional classroom conduct	

Competency #	Section 2 Comments

Competency #	Section 2 Comments (continued)

3. Delivery of Instruction

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Collaborative Learning	• Implemented student-centered instructional activities that allowed for learning to occur among students. • Implemented demonstrations or problem-solving practical exercises that allowed students to discuss solutions and determine answers through exploration and discovery. • Designed student groups to allow for collaborative work.	Used little, poor, or no collaborative learning or student-centered instructional activities	Used some collaborative learning techniques; techniques could be implemented more effectively	Effectively used collaborative learning techniques	Exceptionally used innovative collaborative learning techniques	
b.	Critical Thinking, Problem Solving	• Facilitated opportunities for students to use critical thinking skills by use of select instructional methods and activities. • Placed students in situations to challenge their conceptions, create contradictions, and promote problem solving skills.	Did not foster or create opportunities for students to use critical thinking or problem solving skills	Occasionally fostered critical thinking and problem solving skills	Effectively included opportunities that fostered critical thinking and problem solving skills	Exceptionally provided innovative activities that used critical thinking and problem solving skills to improve the course	
c.	Job Application Relationship	• Demonstrated application, relevancy, and relationship of lesson content to students' jobs or work environments. • Presented practical exercises and discussions in context of job related events and real world situations.	Demonstrated little or no relationship between the lesson content and the job or real world situations	Occasionally or mildly linked lesson content to job or real world situations	Linked the application of lesson content to job or real world situations	Clearly linked lesson content to show effective application to job and real world situations	
d.	Knowledge Transfer	• Implemented practical exercises (PEs) that promoted the transfer of a student's current and new knowledge to new situations.	Did not use PEs to promote the transfer of knowledge to new situations	Used PEs to some extent to promote the transfer of knowledge with limited success	Used PEs to promote the transfer of knowledge to new situations	Exceptionally used innovative PEs to promote the transfer of knowledge	
e.	Questioning Techniques	• Asked thoughtful, open-ended questions that encouraged critical thinking. • Asked follow-up questions for elaboration and clarification after a student's initial response. • Turned questions back to the students rather than giving a direct answer. • Required students to explain why they believed their particular answer. • Allowed time after asking a question for students to reflect, think, and respond.	Did not use effective questioning techniques, allow ample reflection time for responses, and/ or ask follow-up questions	Used some questioning techniques, with limited success; asked questions with simple answers rather than questions that required critical thinking	Used effective questioning techniques	Exceptionally and consistently used effective questioning techniques throughout the instruction	

3. Delivery of Instruction (cont'd)

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
f.	Discussions	• Allowed students freedom to discover knowledge while effectively steering the focus of discussions toward course objectives when discussions got off-track. • Encouraged discussions of differing opinions and alternate solutions. • Effectively introduced overlooked data, different perspectives, and learning points into discussions when necessary. • Effectively encouraged student discussions and opinions without allowing one student to dominate.	Failed to provoke meaningful discussions; did not monitor and guide discussions in order to maintain a focus on course objectives	Used moderately effective discussion techniques; discussion not always encouraged or refocused when appropriate	Used effective discussion techniques	Consistently used effective discussion techniques to encourage meaningful student discussions; effectively refocused discussions when necessary	
g.	Use of Technology	• Implemented technology into the classroom to enhance student learning. • Demonstrated appropriate knowledge of technical equipment and software that was incorporated into classroom events. • Innovatively used technology to appropriate degrees to enhance the learning experience. • Used technology seamlessly without detracting from the learning environment.	Used little, poor, or no technology	Used some technology with limited success; applied technology ineffectively or inappropriately	Appropriately integrated technology	Used applicable technology productively, innovatively, and effectively to enhance instruction	
h.	Instructional Methods	• Adapted instructional strategies using a variety of concepts and instructional techniques suitable for adult learners. • Delivered the course content using a variety of instructional methods suited for the course content. • Adopted broad use of facilitation methods for content delivery as opposed to lecture based instruction (when applicable).	Poorly used facilitation or other instructional methods suitable for adult learners; made wide use of lecture based instruction	Used instructional strategies that included some variety of methods with moderate success	Effectively used various instructional methods suitable for adult learners	Exceptionally used adult learning theory instructional methods, concepts and techniques	
i.	Verbal / Nonverbal Communication	• Used appropriate verbal and nonverbal communication techniques that encouraged students to engage in the learning process. • Avoided inappropriate or distracting verbal and nonverbal mannerisms.	Used distracting verbal and/or nonverbal mannerisms regularly that hindered learning	Occasionally used distracting verbal and/or nonverbal mannerisms	Used verbal and nonverbal communication techniques appropriately	Consistently used effective and positive verbal and nonverbal mannerisms	
j.	Tailored Learning	• Adapted lesson presentation to account for students' prior knowledge and experiences	Made little or no adaptation for students' prior knowledge	Made moderate adaptation for students' prior knowledge	Adapted instruction to account for students' prior knowledge	Made exceptional efforts to the lesson presentation to account for students' prior knowledge	

3. Delivery of Instruction (cont'd)

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
k.	Student Mistakes	• Used methods, such as discussions, to examine appropriate solutions rather than directly correcting wrong answers. • Effectively used student mistakes as a positive learning tool.	Made improper, poor or no response to student mistakes; students were not aided in learning from mistakes	Made limited use of student mistakes as a learning opportunity	Effectively used student mistakes; helped students identify and learn from mistakes	Exceptionally used student mistakes in a positive, respectful manner to enhance learning	
l.	Time Management	• Structured the instruction of course content to meet course objectives within the allotted time. • Allotted appropriate time for each instructional method used (e.g. giving too much or too little time to conduct a practical exercise or for discussions on a particular topic).	Did not plan the lesson efficiently; poorly executed lesson in the time allotted	Planned and executed lesson with some components allotted too much or too little time	Used time allotted for each portion of the lesson appropriately	Exceptionally used time allotted to efficiently and productively deliver the course content	

Competency #	Section 3 Comments

4. Assessment and Monitoring

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Pre-Assessment of Student Knowledge	• Formally or informally assessed students' skills as a baseline to assist in tailored learning. • Inquired about students' understanding and experiences prior to instruction.	Conducted little, ineffective, or no pre-assessment	Made some attempt to assess student knowledge	Conducted pre-assessment of student knowledge	Conducted a thorough and effective pre-assessment of student knowledge	
b.	Student Comprehension	• Formally or informally measured students' progress and comprehension using assessments to determine material learned and to shape future instruction. • Employed a variety of methods to check student understanding and learning. • Gave appropriate, prompt, and specific feedback to students in order to reinforce learning or correct misunderstandings.	Conducted little, ineffective, or no assessment to check student comprehension	Made some attempts to assess student comprehension with limited success	Used effective techniques to assess student comprehension	Consistently used assessments to effectively check student comprehension and used results to shape future instruction	
c.	Student Involvement	• Monitored student involvement to ensure all students were actively engaged in the learning process (e.g. noting students' non participation and attempting to involve them in a discussion or questioning their understanding).	Conducted little or no monitoring of student engagement or activity	Casually monitored student involvement; limited attempts to involve reluctant students	Monitored student involvement and attempted to engage all students	Consistently monitored students involvement and actively engaged all students	

Competency #	Section 4 Comments

5. Continuing Professional Responsibilities – (Prior Knowledge or Self Assessment only)

Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)

	Competency	Evidence of Competency	Does not use assessments to effectively improve performance	Uses assessments moderately; seeks feedback at times; feedback not always used constructively	Uses feedback and assessments	Consistently uses feedback effectively and performs self assessments to increase performance	
a.	Assessments	• Actively seeks feedback from peers and staff and uses feedback to enhance performance. • Conducts periodic self-assessments to help identify areas needing improvement. • Uses end-of-course student assessments/feedback to enhance performance. • Proactively uses areas identified in self, student, and staff assessments to improve performance.					

5. Continuing Professional Responsibilities – (cont'd)

	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
b.	Knowledge Base	• Actively seeks to maintain knowledge base of subject areas included in course content. • Ensures changes are incorporated into course material and instruction.	Makes little or no attempt to incorporate new material or update knowledge base	Usually incorporates changes to material; generally maintains knowledge base	Maintains adequate knowledge base and incorporates it into classroom instruction	Constantly seeks new information and updates to integrate into course material; aggressively seeks to maintain knowledge base	
c.	Professional Development	• Assesses needs for professional growth and participates in professional growth activities. • Incorporates new skills and knowledge gained through professional development to enhance the quality of instruction.	Pays little or no attention to professional development	Attempts professional development at times, with varying degree of success	Seeks opportunities to gain and apply knowledge and skills through professional development	Actively seeks and participates in professional development opportunities	
d.	Professionalism	• Presents himself/herself in a professional manner through actions, speech, mannerisms, and all interactions within the classroom. • Displays sound judgment, respects confidentiality, and conducts all actions ethically and honestly.	Displays several significant departures from professional conduct	Occasionally displays some minor departures from professional conduct	Maintains professional mannerisms	Consistently displays highly professional conduct in all aspects of instructor duties inside and outside the classroom	

Competency #	Section 5 Comments

Section 6 Overall Comments

APPENDIX F

Proposed End-Of-Course Assessment

ALM End-of-course Form

1. Overall, how well do you think WOSSC instructors served as facilitators of learning who asked probing questions, encouraged content related discussions, and encouraged students to discover answers on their own using various techniques rather than dominating the class with lecture based delivery of material? Specifically, how well did instructors do each of the following?

	Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Were facilitators as opposed to lecturers?	Poorly used facilitation or other instructional methods suitable for adult learners; made wide use of lecture based instruction	Used instructional strategies that included some variety of methods with moderate success	Effectively used various instructional methods suitable for adult learners	Exceptionally used adult learning theory instructional methods, concepts and techniques	
b.	Encouraged content related discussions?	Failed to provoke meaningful discussions; did not monitor and guide discussions in order to maintain a focus on course objectives	Used moderately effective discussion techniques; discussion not always encouraged or refocused when appropriate	Used effective discussion techniques	Consistently used effective discussion techniques to encourage meaningful student discussions; effectively refocused discussions when necessary	
c.	Provided for learning through discovery rather than simply stating or relating content?	Haphazardly or inappropriately applied discovery learning techniques, or techniques not attempted at all	Attempted or used some discovery learning techniques to various degrees with moderate success	Applied discovery learning techniques successfully	Displayed exceptional knowledge and thoroughly used discovery learning principles and techniques	

2. Do you have any suggestions for how WOSSC instructors might have more effectively served as facilitators and incorporated the concepts listed in question 1 above? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question:

3. Do you think the WOSSC accounted for (considered, showed an awareness of) your existing experience level during delivery of instructional material?

	Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Accounted for (considered, showed an awareness of) my existing experience level during delivery of instructional material	Made little or no adaptation for students' prior knowledge	Made moderate adaptation for students' prior knowledge	Adapted instruction to account for students' prior knowledge	Made exceptional efforts to the lesson presentation to account for students' prior knowledge	

4. Do you have any suggestions for how WOSSC might have more effectively accounted for your experience? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question:

5. Overall, how well do you think WOSSC instructors introduced collaborative learning, problem solving, and critical thinking concepts into their lesson presentation. Specifically, **using the box below**, how well did instructors:

   a. Provide opportunities for students to interact with other students in collaborative environments?
   b. Use problem solving exercises to enhance or deliver learning concepts?
   c. Create situations and exercises that encouraged students to learn through application of critical thinking skills to discover answers?

	Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Provide opportunities for students to interact with other students in collaborative environments	Used little, poor, or no collaborative learning or student-centered instructional activities	Used some collaborative learning techniques; techniques could be implemented more effectively	Effectively used collaborative learning techniques	Exceptionally used innovative collaborative learning techniques	
b.	Used problem solving exercises to enhance or deliver learning concepts?	Did not foster or create opportunities for students to use problem solving skills	Occasionally fostered problem solving skills	Effectively included opportunities that fostered problem solving skills	Exceptionally provided innovative activities that used problem solving skills to improve the course	
c.	Created situations that required application of critical thinking skills?	Did not foster or create opportunities for students to use critical thinking skills	Occasionally fostered critical thinking skills	Effectively included opportunities that fostered critical thinking skills	Exceptionally provided innovative activities that used critical skills to improve the course	

6. Do you have any suggestions for how WOSSC instructors might have more effectively employed the techniques listed in question 5 above? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question.

```



```

7. Overall, how well do you think WOSSC instructors incorporated modern technology into the classroom in innovative ways to boost the learning experience and reduce the learning time while maintaining learning effectiveness?

	Competency	**1** **Needs Major Improvement**	**2** **Minor Issues**	**3** **Well Done**	**4** **Exceptional**	**Rating** (1,2,3,4 or NA)
a.	Incorporated modern technology into the classroom in innovative ways to boost the learning experience and reduce the learning time while maintaining learning effectiveness?	Used little, poor, or no technology	Used some technology with limited success; applied technology ineffectively or inappropriately	Appropriately integrated technology	Used applicable technology productively, innovatively, and effectively to enhance instruction	

8. Do you have any suggestions for how WOSSC instructors might have more effectively employed the use of technology as listed in question 7 above? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question.

```



```

9. Overall, how well do you think WOSSC instructors emphasized lifelong learning and demonstrated how to seek answers to questions students may encounter when no longer formally enrolled in a course?

	Competency	**1** Needs Major Improvement	**2** Minor Issues	**3** Well Done	**4** Exceptional	**Rating** (1,2,3,4 or NA)
a.	Motivated a desire for life-long learning and demonstrated how to seek answers to questions outside of a formal classroom?	Did not motivate a desire to continue learning after the formal class. Did not teach ways to gain knowledge on one's own outside the classroom.	Mentioned the importance of learning outside the classroom, but without emphasis. May have informally mentioned methods of learning outside the classroom	Described the importance of learning outside the classroom, and demonstrated/ described at least one method of answering questions outside the classroom	Inspired a strong desire to continue learning outside the class. Taught multiple methods of seeking answers to future questions.	

10. Do you have any suggestions for how WOSSC instructors might have more effectively emphasized lifelong learning and demonstrated how to seek answers to questions students may encounter when no longer formally enrolled in a course as listed in question 9 above? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question.

11. Overall, how well do you think WOSSC instructors demonstrated strong moral character?

	Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Demonstrated strong character?	Did not serve as role model for strong personal character. Some behavior was morally objectionable.	While no behavior was objectionable, the instructor's personal character seemed potentially faltering in certain circumstances	Demonstrated strong moral character in every aspect inside the classroom.	Demonstrated the highest standards of personal character. Serves as a moral example to others inside and outside the classroom.	

12. Do you have any suggestions for how WOSSC instructors might have more effectively demonstrated strong moral character as listed in question 11 above? We would particularly appreciate your comments if you selected "Needs Major Improvement" for the previous question. You have an extra text block to continue your answer to this question.

Warrant Officer Career College
ACADEMIC INSTRUCTOR ASSESSMENT GUIDE

March 2013 (Ver 1.3)

Preface

The ultimate goal of instructors should be to deliver the best possible instructional experience to facilitate the maximum transfer of knowledge. The purpose of this Guide is to increase U.S. Army instructors' understanding of adult learning concepts required for classroom-based instruction so they can better achieve this ultimate goal.

BACKGROUND

In January 2011, the Army released its publication of TRADOC Pam 525-8-2, *The U.S. Army Learning Concept for 2015*, which identified the concepts for future training in the Army. Later renamed as *The Army Learning Model*, this learning approach was identified as a shift in training methodologies from a platform, lecture-based, delivered instruction to learning strategies based on discovery learning techniques geared toward adult learners. This shift in training methodologies demanded a new focus for instructors in how to deliver knowledge-based material to a classroom-based student. As a consequence, instructors must become familiar with adult learning concepts, techniques, and methodologies in order to adequately employ them in classroom environments.

While each instructor has his/her own unique way of delivering knowledge in the Army classroom, instructors are also expected to apply the overarching concepts that form adult learning theory. These concepts are a departure from past techniques where an instructor stands in front of the classroom and lectures students on a particular subject. Many of the concepts contained in adult learning theory may be foreign to instructors whose own classroom experiences and previous instructor training differed from this model and formed their view of how classroom instruction should be conducted. This Guide explains each competency described in the Academic Instructors Assessment (AIA) form as well as sources for further study, if desired. This Guide does not outline in detail how instruction should be conducted in the classroom, but rather explains concepts that instructors can use to determine if and how those concepts may be employed during their instructional periods.

USING THIS GUIDE

This Guide is designed to accompany the AIA, the form used to assess instructor performance during the course of classroom instruction. The intended audience for this Guide is primarily the instructors themselves. It has been designed to assist instructors in identifying ways to continually improve their performance in the classroom. In addition, raters conducting instructor assessments, staff, and any other personnel requiring more information regarding the AIA may also find this Guide useful.

This Guide is not intended as a document to be read from beginning to end but rather as a source for additional information or study on a particular topic. Section 2, Understanding the Concepts, is arranged to crosswalk with the AIA itself. Each of the competencies listed in the AIA has a corresponding discussion in this Guide, which is outlined in the same sequence. Readers who want to know more information on a particular competency can easily jump to that discussion without having read the previous content. Readers should note that many of the adult learning theory concepts are so closely related that some duplication of material is necessary when discussing two or more competencies in separate areas of the Guide. In addition, many of the discussions on a particular topic also contain references for those interested in additional information beyond the material presented here.

Contents

Introduction

About the Academic Instructor Assessment

Professional development is a continual process for instructors. Professional development for adult educators should be aimed towards improving an educator's teaching capabilities to ultimately enhance student's learning in and out of the classroom through the acquisition of many different knowledge and skills.[1] As part of the professional development process, AIAs are conducted periodically in order to assess instructor and organizational proficiency. Staff identified personnel will conduct these assessments during a particular block of instruction using the AIA form. The AIA will also be used as a self-assessment tool for instructors to rate their own performance.

Assessments are conducted to aid the instructors in their professional development and ultimately improve student learning outcomes. First, however, professional development must be positively perceived by the instructors themselves. It must enhance their knowledge and skills as well as have an impact upon their instructional behavior.[1] It is imperative that assessments be viewed by both the instructors and administration personnel as a tool to help instructors improve on weak areas and not a document containing data for punitive actions.

Rather than viewing a single event by itself, an assessment should be seen as a snapshot of one particular instructional period that, when viewed along with other assessments, provides an overall assessment. Hence, assessment data is collected on an ongoing basis to be incorporated within the professional development process. As a matter of routine, instructors should also conduct self-assessments and review their own ratings along with all other ratings with an eye on implementing strategies in the classroom to enhance weak areas and to help provide a better learning experience for the students.

Explanation of Rating Scale

The AIA is organized around five domains covering all aspects of an instructor's performance. These domains are:

- **Planning and Preparation for Learning**
- **Classroom Environment**
- **Delivery of Instruction**
- **Assessment and Monitoring**
- **Continuing Professional Responsibilities**

Competencies within each of the domains have an associated list of observable behaviors labeled "Evidence of Competency". These are behaviors likely to be observed

in the classroom where instructors are effectively implementing that particular competency. A scale from 1 (*Needs Major Improvement*) to 4 (*Exceptional*) with descriptions provides assistance in rating selections for each competency. An additional entry of "NA" may be made used for those areas "not applicable" or "not assessed".

The *Exceptional* level describes a performance above and beyond acceptable behaviors for a particular competency. Instructors that receive a rating at this level display performance that far exceeds those actions normally required for satisfactory performance. The *Well Done* level describes solid, expected professional performance; instructors should feel good about scoring at this level. The *Minor Issues* rating indicates that the instructor's performance has room for improvement, but that no major problems were observed; instructors should evaluate what could be done to improve this rating. A performance rating at the *Needs Major Improvement* level indicates substantial problems that need attention. *NA* may be "not applicable" if that competency did not fit within the scope of the instruction given. It may also be "not assessed" due to any number of reasons including those that the observer was unable to make a clear judgment for any particular reason.

The competencies are designed to give instructors an assessment of the rater's observations in each domain for that particular visit. One rating by itself is not a complete assessment of that instructor, but rather, one observation at one particular time. While instructors may gain insight on competencies needing improvement based on one observation, multiple observations are necessary to determine trends in instructor teaching methods and use of adult learning concepts.

Key Points to Remember

The following is a short list of thoughts that are important for instructors to keep in mind during examination of teaching methodologies and performance. Instructors should consider these thoughts along with the observer's ratings and comments derived during an assessment:

- While one assessment is useful for reflecting on performance, it is a single snapshot of an instructor's performance during a single specific classroom experience. One rating by itself is not wholly indicative of an instructor's overall performance. To obtain a more comprehensive and accurate assessment, it is important to look for trends in performance over a period of time involving multiple ratings.
- Not all classroom instruction can or should incorporate all adult learning concepts in every instructional period. Some instruction simply does not lend itself to certain types of methodologies. Instructors should examine the content of the material to be delivered and determine what methodologies would work best for that material. Observers should keep in mind whether certain techniques are appropriate to the learning content and subject matter.
- Instructors, and those performing an assessment, all have individual preferences in instructional styles and methodologies. Course content can be effectively

taught using a variety of techniques and methodologies. Individual style and preference is common while still working within the framework of adult learning theory. However, instructors should always take a candid look at ratings and comments to determine if there is room for improvement in their particular approach to classroom instruction.

Using the Feedback

Once an assessment has been conducted, instructors should review the ratings and comments. During their review, the most important concept instructors should keep in mind is that the assessments and ratings are intended to be constructive and not punitive. Assessments are used to help improve classroom instruction and students' learning experience. A review of the assessment should include the following:

- Review the entire assessment and look for areas of higher and lower ratings
- Determine what areas the rater observed as exceptionally good that should be continued and those that need improvement
- Read all written comments for further explanation on applicable ratings
- Reflect on competencies for which you received a lower rating, particularly with respect to how you performed in the classroom
- Assess yourself and then compare your own assessment to that of your classroom observer/rater
- Ask the rater for clarification of ratings or comments in any area that you do not completely understand
- Look for ways to incorporate or improve upon competencies with lower ratings in future classes
- Use the content of this Guide for a further understanding of any particular competency
- Use the associated references and suggestions from the rater for further clarification or ideas for improvement pertaining to any particular area
- For future classes, prepare to incorporate, where applicable, concepts to help improve the classroom learning experience

Self-Assessment

A self-assessment is a personal reflection about one's own professional practice. Self-assessments are conducted without input from others and are aimed at identifying strengths and areas where improvements can be made. Although self-evaluation is a very useful form of feedback, it is an often neglected source of information.[2] Successful instructors continually evaluate the effectiveness of their teaching style. A self-assessment should be conducted before seeking external feedback. Conscientious instructors should constantly monitor their own performance for opportunities to adjust their instructional approaches in order to maximize student learning.[2] Regular self-

assessments are a sign of high motivation, and instructors that conduct them tend also to seek advice on how to improve their classroom effectiveness.

While self-assessments are often informal and continual, the AIA is designed to aid in a more detailed form of assessment. Instructors can use the AIA as a self-assessment tool with a critical inward-looking eye focused on how they perform as a classroom instructor in each of the competencies listed. Their own assessments will help provide them with a basis for comparing their findings with the ratings received from others. Together the assessments can produce indications of strengths and weaknesses and assist in determining where to focus attention for improvement.

Key Terms

In the interest of clarity, the following is a list describing unique terms used throughout this Guide. While most definitions of these terms are used in vastly similar ways throughout the academic community, they can also vary in some respects depending on the author's opinion. For purposes of this Guide, the following definitions apply.

- **Academic Instructor Assessment.** An assessment performed using the AIA form by an appointed observer monitoring a specific instructor during a particular block of instruction.

- **Adult Learning Concepts.** These include a variety of ideas, educators generally agree that adults learn best when:
  o A variety of delivery means and examples are used for transferring the content to be learned to the student
  o The learning content is made relevant to the learners' work (life application)
  o Self-directed, active participation methods of acquiring the learning content are used
  o Learners are able to make use of their prior knowledge and experiences to gain new information
  o Instructors use discovery learning techniques as opposed to a lecture-based delivery of information

- **Adult Learning Theory.** Adult Learning Theory, or andragogy, as described by Malcolm Knowles (1980), consists of a set of ideas about how adults learn new concepts, skills, or information. It focuses on the idea that adults learn in contrastingly different ways than children (pedagogical learning). The model used to teach younger children does not recognize developmental changes that take place as children become adults. Using pedagogical principles for adult instruction is often a recipe for student tension, resentment, and resistance.[3] Adult Learning Theory incorporates concepts and principles specifically geared toward the adult learner.

- **Collaborative Learning.** An instructional method where learners are paired or grouped together for the purpose of meeting an academic goal through the collective efforts of the entire group.

- **Competency.** A specific skill associated with one of five domains in the AIA. Each competency has an associated list of identifiable observations, labeled "Evidence of Competency," which can be made during an assessment.

- **Critical Thinking.** Critical thinking is a central term to describe a process that covers many aspects of cognitive application in problem solving. It involves functions such as questioning, reasoning, analyzing, conceptualizing, evaluating, comparing, reflecting, and deciding. It also includes an examination of all associated information and thoughts generated through those cognitive functions that impact a person's beliefs, opinions, or positions, and ultimately to answer questions, solve problems, or determine a course of action.

- **Discovery Learning.** Discovery learning refers to a method of instruction that allows learners to acquire answers and information independently through self-discovery by using problem-based exercises and exploratory efforts on their own. Discovery learning is contrasted with methods where the instructor simply tells the learner what information to know.

- **Facilitator.** A facilitator is someone who assists a learner in obtaining information, concepts, and other course objectives through the practice of adult learning methods such as effective questioning, discovery learning, and group discussion techniques. As opposed to a lecture-based approach, a facilitator uses Adult Learning Concepts to allow the transfer of knowledge without taking a particular position during the course of discussions and effectively allows learning to take place in the classroom between individual students and among groups.

- **Tailored Learning.** Tailored Learning is the process of adapting instructional methodology to the needs of the individual learners in the classroom by accounting for their prior experience and knowledge. This methodology allows the learner to move quickly through previously mastered course content and then focus on new or unfamiliar material.

Understanding the Concepts

Planning and Preparation for Learning

Preparing to teach adult learners in the modern classroom can be a challenge if the instructor is not aware of the typical characteristics of adult learners. Adults are strikingly different than children in their outward approach to learning as well as in the inherent characteristics that accompany most of them into the classroom, such as prior work experiences, varying degrees of formal education, differing career goals, etc. As a result of many years of study, much research is available on adult learning and adult learners. In a nutshell, most research states that adults are not simply bigger children when it comes to how and why they enter the classroom. They have different wants, needs, perceptions, motivations, levels of education, background experiences, and ways of receiving and retaining information. To better understand the adult learner, instructors are encouraged to review the information available. The following lists outline some of the characteristics of adult learners.

In a course designed to help instructors understand more about adult learning, Dr. Goldstein, Dean of Humanities, Shoreline Community College, describes adult learners as often having: [4]

- To share a classroom with learners of various ages and experience levels from teens to seniors
- Many different strengths and weaknesses
- Differences in work ethic
- Varying familiarization with technology
- Differences in life experiences
- Family and personal issues that may impact learning
- A fear of failing
- A need to know the relevance of what they are learning
- A need for comprehensive education whereby theory is put into actual hands-on practice
- A fear of new ways of learning such as group work, technology, getting verbal feedback, peer critiques, etc.
- To take some time to adapt to ungraded assignments and activities
- To have a sense of purpose behind their learning
- A cultural diversity that may impact social and gender relationships in the classroom

In order to provide the best learning experience for students in the adult classroom, instructors should understand how adults learn best. Education experts indicate the following points regarding adult learners: [5]

- Adults have a need to know why they should learn something before investing time in learning. Trainers must ensure that the learners know the purpose for training as early as possible.

- Adults enter any learning situation with an image of themselves as self-directing, responsible grown-ups. Adult learners' diverse experiences and characteristics cause them to have different needs for learning. Trainers must help adults identify their needs so they can direct their own learning experience.

- Adults come to a learning opportunity with a wealth of experience and a great deal to contribute. Trainers are successful when they identify ways to build on and make use of adults' hard-earned experience.

- Adults have a strong readiness to learn those things that help them cope effectively with daily life. Training that directly relates to situations the learners face is viewed as relevant and will increase receptiveness to learning.

- Adults are willing to devote energy to learning those things that they believe help them perform a task or solve a problem. Trainers who determine needs and interests and develop content in response to these needs are most helpful to adult learners.

- Adults are more responsive to internal motivators such as increased self-esteem than external motivators such as higher salaries. Instructors should use these inherent motivators to increase interest in learning and improve retention. They should create a safe learning climate to ensure that this internal motivation is not blocked by concerns such as poor self-concept or time constraints.

Setup / Classroom Preparation. Preparation and setup of the adult learning classroom is critical and depends on how the instructor intends the information to be delivered or discovered. The classroom, instructional materials, and equipment should be prepared in advance of the actual instructional period, and should be properly arranged to facilitate the type of instruction planned. When planning, instructors must either have the ability to change the seating, table, or classroom layout to accommodate the desired instructional method or must plan to use an instructional method that is complementary to the existing layout. Instructors should consider the following guidelines in relation to planned interaction between learners and instructors when determining how to set up the classroom.[6]

- **Traditional Classroom**. Tables are arranged in rows with all seats facing the instructor.
    - Facilitates a lecture-type environment
    - Provides a writing surface
    - Applicable for individual work
    - Accommodates large groups
    - Does not readily accommodate small group discussions or interactions

- **Large conference Table**. Placing tables together to create one large table. Seats are arranged around the perimeter facing in and the instructor/facilitator on one side or one end.
  - Facilitates large group discussions
  - Provides a writing surface
  - Not applicable for small group work

- **U Shape / Horseshoe**. Setting up the tables to create a large U shape or horseshoe with the facilitator up front.
  - Provides a more informal / interactive setting
  - Allows all students a clear view of the facilitator and other students
  - Facilitates large group discussions and interactions
  - Facilitates demonstrations or use of other visual aids
  - Provides a writing surface
  - Not applicable for small group work

- **Auditorium or Theatre**. Chairs are arranged in one large block without tables for viewing a lecture or visual aid.
  - Useful for formal presentations or lectures involving one way communication
  - Accommodates large groups
  - Allows students to see visuals easily
  - Does not provide a writing surface
  - Not applicable for student interaction or group work

- **Small Pods**. Tables are arranged in small clusters with 3-6 seats around them.
  - Ideal for an environment where the majority of the content will be delivered through small group work and interaction
  - Facilitates small group discussions
  - Encourages interaction with peers
  - Eliminates the facilitator as the focal point of learning
  - Makes large group discussions and central audio visual use more difficult

Regardless of the type of setup selected, facilitators should ensure all arrangements and equipment tests (to include tables, chairs, technological equipment, visual and auditory aids, handouts, and any other setup activities) are completed prior to the start of the instructional period. All electronic equipment should be tested for proper operation prior to its use.

Handouts and Other Materials. Handouts are a common source of information. They vary widely in their formality from handwritten to professionally produced and in level of detail from very detailed references to loose outlines with only major headers. Handouts can be effective if they are organized according to specific learning outcome goals intended for specific learning periods. The British Columbia Institute of Technology recommends that a well-designed handout: [7]

- Clarifies the topic being discussed
- Provides an alternative to note-taking when focus on the presentation is desired
- Saves the instructor the trouble of trying to portray time-consuming detail on a chalkboard or whiteboard to illustrate what is being discussed
- Makes errors in note-taking less likely, giving students a reliable reference for learning
- Provides material beyond the lecture
- Provides more up-to-date material than contained in course readings
- Frees up time for other learning activities

Handouts and other supplemental material should be prepared and assembled prior to the instructional period. While preparing for their use, facilitators should consider the following factors:[8]

- What kinds of handouts or other materials will best support the instruction and will best appeal to the learners' learning styles?
- What reference materials would be useful to the learners after the instructional period ends?
- How much time and resources are available to prepare applicable handouts for a particular lesson?

Some of the most commonly used handouts include:[7]

- **Complete notes**
  - Applicable when no suitable textbooks or learning guides are available for student reference
  - Ensures the information that the students have is accurate
  - Can reduce lecture time and increase time for other student learning activities

- **Note-taking guide**
  - Contains main topic headings
  - Organized to aid the student in following the logical flow of information
  - May be printed with plenty of space between headings to aid in note taking
  - Encourages student involvement by following along and taking notes

- **Illustrations**
  - May be photos, sketches, diagrams, charts, graphs, flowcharts, or maps
  - Those produced by someone who understands the material are far more effective and accurate than something drawn quickly in class
  - Helps explain difficult topics and procedures
  - A clear, well-labeled graphic can replace a great deal of text

- **Case studies**
  - Lifelike situations that illustrate the lesson topic
  - May be used as the basis for discussions and other group exercises
  - Effective for showing the relevance of the topic under discussion

Knowledge of Content. First and foremost, instructors must know the content of the subjects they teach and the relevant applications of that content. However, simply knowing a list of facts that will be transferred from an instructor to a student is not sufficient for effective adult learning. Instructors must know considerably more about a particular subject than just what they plan to teach. An in-depth knowledge of a subject area is crucial in order to facilitate discussion and development of conflicting ideas and theories among students. Instructors who display a comprehensive knowledge of the subject promote credibility and acceptability of facts and concepts among adult learners. In this same vein, core standards for all teachers at the University of North Carolina include that during preparation for an instructional period, instructors should attempt to be as well-versed as possible in the following areas:[9]

- Knowing the subject matter considerably beyond the content they are expected to teach
- Having a strong background in the subjects related to their specialty area
- Being current in the terms, definitions, concepts, ideas, and examples that apply to the specific subject they are teaching
- Understanding major concepts, assumptions, debates, and other similar information applicable to the discipline they teach
- Knowing how to apply information from their discipline to real-world situations

Classroom Environment

Creation of a good classroom environment stretches far beyond the physical aspects of the classroom. Of course, conditions such as proper temperature, lighting, and distracting noise levels are important, but creating a proper classroom environment largely centers on how adult learners perceive themselves in relation to how they fit into the learning experience. These perceptions by adult learners influence their motivation to learn and are largely affected by how the facilitator prepares for and controls the environment. Adult learners need a positive, supportive, comfortable, and encouraging setting where they feel they belong. They need to experience a feeling of trust with and between the instructor and their fellow learners. A sense of active learning where students can work independently and discover answers on their own are qualities of a good classroom environment. Above all, an atmosphere of respect and rapport must be established and maintained between all classroom participants. Instructors should ensure that their classrooms are environments characterized by respect and equal opportunity for all students.

Safety Standards. Adult learners need to be able to undertake their learning in a healthy, safe, and supportive environment. Prior to class learners should be introduced to the fundamental safety principles so that they can identify and control risk and assume responsibility for their own health and safety and that of others. The hazards adult learners face are the same as those faced by younger learners; slips, trips and falls; equipment or machinery; incorrect lifting and carrying; working at heights; electricity; working with computers; fire; and personal safety. While it is the responsibility

of the instructor to provide a safe learning environment, application of adult learner principles to health and safety practice to some extent leads back to the concept that the adult learner takes responsibility for her or his own health and safety.

Ewings provides that in consideration of health and safety issues during classroom instruction preparation, instructors should remember the following:[10]

- In terms of health and safety, what applies to all learners applies to adult learners
- For good health and safety practice to be achieved, adult learners need to be fully involved
- All health and safety related policies and procedures required by a higher authority or learning institution should be implemented
- The core approach underpinning good health and safety practice is for instructors and adult learners to understand and to apply comprehensively the process of hazard identification, risk assessment, and risk control

Overall Environment. The overall classroom environment results from a combination of many factors that encompass numerous other competencies. The ultimate goal of carefully establishing the classroom environment is to create an atmosphere where students feel comfortable and where learning is facilitated by positive influences. The League for Innovation in the Community College gives some key suggestions for instructors to consider when building a positive learning environment:[11]

- Get to know the students and allow opportunities for students to get to know each other
- Create an atmosphere in the classroom where students feel accepted and fit in, where relevant questions are encouraged, and where expectations for students and instructors are clear
- Make the physical environment comfortable
- Vary the teaching strategies to support different learning styles
- Value individual experiences and contributions by students

Shaffer of Penn State York describes Hilsen's tips for establishing a positive classroom climate. Her tips include:[12]

- Be concerned about the physical setting
- Make examples you use relevant to students' lives
- Address students by name
- Establish rules - get student input - be compassionate, not cynical; sometimes rules need to be broken
- Constantly read your audience's responses - are they lost, bored, anxious? Give breaks in long classes
- Provide non-verbal encouragement - maintain eye contact, move around the room, be animated and expressive
- Model the thinking process in your field. Don't just tell them - show them, let them practice

- Use positive reinforcement
- Keep tabs on how your students are doing
- Pause when asking questions - 15 seconds
- Don't talk down to students
- Facilitate discussions - don't be the emcee
- Use peer pressure to your advantage
- Let your students provide feedback during the course
- Recognize and engage students outside of class
- Find out about student accomplishments and mention them

Shaffer further describes key points made by Gloria Holland in a presentation on *The Adult Learner* in 2006. Holland states that in order to support the adult learner in modern classrooms instructors should:[12]

- Treat them as partners in the learning process
- Ask for their input about their learning goals
- Invite them to share their expertise and experiences
- Make them feel that the course schedule takes into account their needs outside the classroom
- Put them at ease in the learning environment
- Show them the relevance of instruction
- Return graded assignments quickly with meaningful feedback
- Ask them for feedback about the course throughout the learning process

Respect and Rapport. Respect is the foundation for a successful classroom environment. The importance of respect in the classroom is critical to creating a learning centered atmosphere where students feel comfortable in sharing ideas and actively participating in the learning experience. Students should understand the importance of respect and how to show that respect to one another during the course of classroom activities. Respect is a two-way street between students and instructors. Students can sense when they are not being properly respected by the instructor or by other students. A feeling of non-respect can have a drastic effect on a student's ability to learn in that particular environment. Students will give more respect to each other and to the instructor if they sense the same respect in return. Students know when an instructor genuinely cares about their success and will often be more receptive to learning when they feel a sense of respect and support.

Rapport is the climate of classroom relationships established between instructors and students. Classrooms that have good rapport are ones that are built on a foundation of mutual trust and respect from and between instructors and students. Rapport is one of the fundamental factors leading to students' feeling capable, competent, and creative so they can reach their learning potential. Establishing a healthy rapport in the classroom is not the result of any single act, but rather instructors must continually help establish and encourage actions that lead to good rapport between the students as a group and between the students and instructor.

Mendes provides the following list of considerations for helping to build a healthy respect and positive rapport atmosphere in the classroom.[13]

- Explain course policies and why they are what they are
- Get to know the students immediately and call them by name when addressing them
- Arrive at class early and stay late, allowing time to chat with students
- Learn something about students' interests, hobbies, and aspirations. Ideal times are just prior to class beginning or right after it ends
- Mention students' names, skills, ideas, and knowledge in presentations
- Be enthusiastic about teaching and passionate about the subject matter
- Make eye contact with each student during the course of instruction
- Be consistent and treat all students fairly; hold all students to the same set of classroom standards
- Be respectful and allow all students an equal opportunity to participate. Monitor and avoid interruptions by classroom participants
- Acknowledge responses and questions from students
- Listen actively and allow individuals to state their position on a given topic
- Use responses beginning with "I agree," "I appreciate," and "I respect"
- Maintain a sense of humor in the classroom; Seek opportunities to incorporate a quick story or anecdote
- Be humble, acknowledge strengths in others
- Use self-disclosure when appropriate to help become a real identifiable person
- Build on what is heard from students by sharing personal stories, interests, and worries without forcing personal opinions on others
- Relate real world situations to subject content and create and use personally relevant class examples
- Offer students extra help. Post and keep office hours. Work with students one-on-one and seek to be available for assistance during times that accommodate the students' schedule

Motivation. Learners have a wide variety of reasons for seeking education. Neglecting to account for the wide array of reasons, and instead assuming that all learners share the same motivation for learning, will almost certainly cause problems as learning outcomes will be developed that neglect many learners' background and expectations.[14]

> "Adults can be ordered into a classroom and prodded into seats, but they can't be forced to learn. On the other hand, adults who see a need or have a desire to know something new are quite resourceful. When the conditions are right, adults seek out and demand learning experiences. The key to using adult natural motivation to learn is tapping into their most teachable moments; those points in their lives into which they believe they need to learn something new or different." [15]

There is an apparent window of opportunity for maximum adult learning during which adults are most receptive. This window is open when adult students have a need for new information that benefits them in some way. These conditions are often brought on by life changing events, as described further in the paragraph below. There is also a time after which adult learners cannot be enticed without a substantial effort. Of note, the window of opportunity not only applies to an adult learner's receptiveness to and motivation for learning, but also to retention of the learned material. Newly learned skills can quickly decay if adult learners are unable to apply their skills or given no opportunity to practice them. [15]

In most cases, adults are motivated to learn in response to life-changing events in their professional lives (such as a new job, retirement, promotion, or being fired) or personal lives (such as marriage, divorce, becoming a parent, death of a loved one, buying a home, or moving). These changes frequently cast the adult into a new and unfamiliar situation where there are many unknowns and a need to learn becomes readily apparent. As the motivation to learn stems from real-life challenges, adults usually respond best to learning experiences that directly address these challenges and help them find solutions. Learner motivation can be increased by making the link between the learning experience and their real-life circumstances readily apparent.[15]

Although intrinsic motivation (motivation stemming from personal goals and interests) may generally provide the strongest motivation, adult learners who are not so personally motivated (but who must still learn anyway) may be led into learning and participating. The instructor's goal should be to increase curiosity and interest in the subject matter and to make a clear and early link between the subject matter and usefulness - either in a personal or professional life. In so doing, an instructor can create motivation in those inclined to apathy towards the subject matter. Sometimes, participation and motivation can be increased simply by understanding the students' expectations about the course, both positive and negative. [15]

In Dr. Goldstein's course for instructors she further stipulates that, as a rule: [4]

- Adults are highly motivated when they need to learn something new or different which makes them very teachable
- There are moments when adults are receptive to learning and better able to retain their learning
- Adults need to use their new learning immediately, or they lose their newly learned skill or knowledge
- Most often, adults are more likely to seek out learning experiences because of life-changing events
- Adults are motivated to learn if they perceive that the learning is relevant to the rest of their lives or if it helps to maintain their sense of self-esteem or pleasure
- The adult's level of motivation can often be increased if the instructor stimulates curiosity about the subject, demonstrates its usefulness, creates a safe environment for the learner, and explores learners' expectations about the learning experience

Furthermore, Goldstein provides the following motivational techniques as guidelines for the instructor to help increase and maintain motivation in the adult classroom.[4]

- Be enthusiastic toward the class and lesson topic
  - Exhibit self-confidence, high expectations, and expertise
  - Start and end class on schedule
  - Demonstrate professional demeanor and appearance at all times

- Arouse the achievement motive
  - Give recognition (reward) whenever possible, ensuring that it is deserved
  - Stimulate students to set high goals for themselves; Emphasize performance
  - Assist students in evaluating their progress toward their goals
  - Utilize curiosity, and encourage its growth
  - Emphasize need to know and the student's benefits from excelling in the subject matter
  - Provide realistic goal setting (Intermediate, Long Range)

- Have concern for the students
  - Be available for individual counseling
  - Follow up on poor performance
  - Be friendly, sincere, and show an interest in the class
  - Assign questions and tasks to students in keeping with their ability to perform

Discovery Learning Principles. Discovery learning is an approach that can be facilitated by particular teaching methods and guided learning strategies. Discovery learning encompasses not only the instructional strategies employed by the teacher, but also includes the learning effects occurring within the learner and the environment created when such strategies are used.[16] Adults tend to be focused on the practical components of learning new subject matter, and solving problems is one of the most beneficial aspects of learning for adults. As such, learning curriculum should be organized around problems relevant to the students' out-of-classroom lives rather than subjects.[14]

Castronova's article *Discovery Learning for the 21st Century*[16] discusses the idea that discovery learning encompasses an instructional model and strategies that focus on active, hands-on learning opportunities for students as described by Dewey in 1916/1997 and Piaget in 1954 and 1973. Castronova further states that Bicknell-Holmes and Hoffman's 2000 work describes the three main attributes of discovery learning as:

- Exploring and problem-solving to create, to integrate, and to generalize knowledge
- Student-driven, interest-based activities in which the student determines the sequence and frequency

- Activities to encourage integration of new knowledge into the learner's existing knowledge base

When students are engaged in discovery learning they take an active role in creating, integrating, and generalizing knowledge through exploration and problem solving. The traditional lecture format of many classrooms generally results in fairly passive learners attempting to absorb lecture material spoken to them, with limited deviation. Instead, discovery learning engages the learner in becoming an active participant in his or her learning and develops a broader array of skills by encouraging risk-taking, problem solving, and an examination of unique experiences from their background.

Discovery learning is generally guided by the principle that learning is not a rigid progression of lessons, activities, and specific prescribed ideas managed by the instructor. Instead, students guide and determine the course of learning. Discovery learning encourages students to learn at their own pace with some degree of flexibility and is based on the principle of using a learner's preexisting knowledge and experiences to create new knowledge. Familiar scenarios enable students to relate new knowledge to their existing knowledge, increasing its stability and foundation within the cognitive structure of students' understanding of the subject matter.[16]

In contrast to traditional forms of learning, Castronova summarizes discovery learning as:[16]

- **Active rather than passive** – Learning is not merely absorbing what is presented by the instructor, but includes actively seeking new knowledge. Students learn through hands-on activities that are tied to seeking solutions to real world problems. When students understand how the content can be applied in real world contexts, they become more engaged and actively seek answers and information.

- **Process-oriented rather than content-oriented** –Discovery learning focuses on the process of how the content is obtained rather than the content itself or end product. Discovery learning highlights how to analyze and interpret information to help better understand what is being taught rather than citing correct answers from rote memorization. This process-oriented approach to learning is applicable to a variety of topics as opposed to the production of one answer to one question typically found in content-oriented learning.

- **Where failure is important** – Failure in discovery learning is viewed as a positive situation where learning can occur. Discovery learning embraces the fact that wrong answers are an opportunity for learning through further exploration and discovery. Cognitive psychologists have shown that failure is central to learning.

- **Where feedback is necessary** – Feedback in the learning process is an essential part of discovery learning. When opportunities for topic discussions with other learners are presented, student learning is enhanced, deepened, and

better retained. An element of learning is lost without the opportunity for feedback.

- **Where understanding is deeper** – When learning opportunities are made possible by encouraging natural investigation through active, process-oriented methods of teaching, deeper learning is experienced by the student. Human beings are born with innate curiosities that drive them to learn. Students can better internalize concepts when they use a natural progression to understand them during the learning process.

Implementation of discovery learning principles in the classroom can generally be categorized into five basic categories. Castronova describes these categories as:[16]

- Case-based learning
  - Case-based learning is accomplished through the use of stories or vignettes
  - Stories contain information or circumstances students need to learn
  - Through examination, students form decisions based on their knowledge of the content area
  - Learning takes place as students discuss how and why they made their decisions

- Incidental Learning
  - One of the more enjoyable forms of discovery learning.
  - Learning is a by-product of an incidental learning task in which the students are engaged.
  - Many times the task takes the form of a game
  - Works well with dull topics and rote memorization
  - Students are often motivated to learn topics or skills that are typically perceived as uninteresting
  - Students must look for answers in order to have the knowledge to participate in the activity

- Learning by exploring/conversing
  - Based on an organized collection of questions and answers, individuals can ask about a particular topic or skill
  - Method involves questioning, answering, and questioning more
  - Curiosity is used to serve as a dramatic motivational tool

- Learning by reflection
  - Uses an interrogative approach in which students learn to apply higher-level cognitive skills
  - Students reflect on what they know in comparison to the qualities they are examining
  - Encourages student to learn to ask better or deeper questions
  - Students learn to do a more sophisticated analysis

- Simulation-based learning
  - Students are essentially role-playing in an artificial environment
  - Provides an opportunity for students to develop and practice a complex set of skills
  - Students can witness the application of abstract concepts
  - Time and the natural environment can be manipulated to guide discovery
  - No real world consequences or fear of failing in a simulation
  - Allows for events that are impossible, impracticable, or improbable in real life

Examples of discovery learning principles are provided in Table 1.

Category	Example
Case-based Learning	Groups of students are given a historic battle case to read. The class examines the information then discusses possible alternative courses of action that could have been taken
Incidental Learning	Classroom game show involving applicable material Crossword puzzle with content related answers
Learning by Exploring/Conversing	Students are given a mystery to solve which can only be solved by asking questions
Learning by Reflection	Instructor avoids direct answers to student questions and responds with additional questions for the student to answer
Simulation-based Learning	Planning and executing a defensive mission of a battle position in foreign country terrain within a game-based simulator

Table 1. Discovery Learning Examples.

For more information on discovery learning, see Castronova's "Discovery Learning for the 21st Century: What is it and how does it compare to traditional learning in effectiveness in the 21st Century?" (2002)[16] which can be found at: http://teach.valdosta.edu/are/Litreviews/vol1no1/castronova_litr.pdf

Communication. Developing effective communication with adult learners involves engaging students and encouraging their participation. In order to facilitate student engagement, instructors often use one of the most common forms of communication in a classroom environment: the class discussion. Good communication and effective use of discussions can assist in enhancing the knowledge creation process and ultimately lead to deeper learning. Instructors can also use class discussions as an opportunity to assess student progress and understanding.[17]

Classroom communications become more effective when students have developed a positive rapport with their classmates. Instructors can encourage the development of rapport by providing opportunities for students to communicate with

each other. The use of discussions can assist in establishing effective student relationships by providing opportunities for positive classroom interactions. These communication opportunities assist in creating a comfortable environment where discussions provide avenues for learners to interact with one another and share their unique perspectives and insights.[17] While the use of classroom communication techniques involving discussions can provide an effective method of facilitating the exchange of ideas between students, instructors must be equipped to guide the discussions toward the content to be learned. The instructor must equally ensure that respect and professionalism is maintained between students and in student responses.[17]

Positive classroom communication that includes both the students and the instructor helps to create an environment that is conducive to effective student learning. When an instructor is successful in establishing an environment where effective communication is experienced, students feel more comfortable in providing their experiences, perspectives, thoughts, views, knowledge, and ideas to the rest of the class in a mutual exchange of information.[17]

Common examples of how instructors may encourage the use of effective classroom communication include:

- Creating discussion opportunities either as a large class or in small groups
- Organizing debates between students or groups of students
- Creating group projects where students must collaborate
- Making use of effective questioning techniques

Professional Conduct. Classroom instruction should always be conducted in a positive, professional manner. Instructors and students alike are expected to conduct themselves accordingly. Adherence to professional standards by instructors and students should always be expected during any aspect of student instruction.

According to Woodul, instructors that practice good professional conduct:[18]

- Demonstrate appropriate behaviors, attitudes, and skills related to the conduct of a professional educator or those actions that are generally recognized by professional standards
- Wear attire considered appropriate for the setting
- Treat all students with respect and maintain an appropriate relationship with students in all settings
- Support, acknowledge, and respect diversity among individuals and influence classroom behavior in positive ways while maintaining all students' dignity
- Avoid unprofessional distracters during instructional periods that may be considered rude, may cause class interruptions, or may be offensive to some individuals
- Demonstrate professional interactions with peers, faculty, staff, and administrators

- Use appropriate professional language in oral and written communications, including avoidance of speech that is considered abusive, profane, vulgar, demeaning, or obscene
- Avoid any act of harassment based on sex, race, religion, disability, age, and national origin
- Act fairly, consistently, and prudently in the exercise of authority and assess students based upon their demonstrated competency, merit, and performance, without regard to personal factors that are irrelevant to the program involved
- Protect the rights of others in the educational setting and do not retaliate, coerce, or intentionally intimidate others in the exercise of their rights
- Avoid any intentional solicitation or encouragement of a romantic nature whether written, verbal, or physical; avoid consummation of a romantic or physical relationship with a student
- Hold in confidence information learned in professional practice or contained in educational records, except when disclosure is required by pertinent regulations or statutes
- Act and speak respectfully in educational settings as a representative of the institution

Delivery of Instruction

In the early 1970s Malcolm Knowles introduced the term "andragogy," describing differences between children and adult learners. Andragogy focuses on special needs of adult learners. Knowles' adult learning theory contends that an adult's learning process is drastically different than a child's and, therefore, should be approached and taught in a different manner. He lists six key assumptions about adult learners which have become the foundation of adult learning. Caruso summarizes those assumptions:[19]

- **Self concept.** This refers to adults becoming more self-directed and independent as they mature. Adults typically want to choose what they want to learn, when they want to learn, and how they want to learn. This assumption means that educators can provide more choices for learners, such as allowing them to design their own tests and/or providing a collaborative learning environment that fosters mutual respect.
- **Experience.** Adult learners have a wealth of life experiences that they bring with them into new learning experiences. Because of these experiences, they are able to contribute richness to class discussions and are considered valuable resources for learning from and with each other. Some of the experiences, though, may cause misinformation or biases related to the new learning and must be clarified so as not to cause a barrier to the new learning.
- **Readiness to learn depends on need.** Whether or not an adult is ready to learn depends on what they need to know in order to deal with life situations. Life situations that compel adults to learn include such things as learning to care

for a child who has been diagnosed with a disease or learning to cook healthy meals to prevent health risks.

- **Problem centered focus.** Adults need to see the immediate application of learning. Therefore, they seek learning opportunities that will enable them to solve problems.

- **Internal motivation.** Adults will seek learning opportunities due to some external motivators, but the more potent motivators (self-esteem, better quality of life, self-actualization, etc.) are internal.

- **Adults need to know why they need to learn something.** Adults need to know what is in it for them and how this new knowledge will solve a problem or be immediately applied.

Understanding these assumptions helps focus how training should be delivered to adult learners. In that light, those assumptions are imbedded into the concepts discussed in the following paragraphs and often one specific concept includes more than one assumption. For more information on andragogy and Knowles' adult learning theories see Caruso's, *Malcolm Knowles and the Six Assumptions Underlying Andragogy*.[19]

Collaborative Learning. Collaborative learning is a method of teaching and learning in which students team together in groups for the purpose of exploring a significant question or creating a meaningful project. "The term 'collaborative learning' refers to an instruction method in which students at various performance levels work together in small groups toward a common academic goal."[20] The use of collaborative learning in the classroom promotes the idea that students own the responsibility for their own learning as well as their fellow students. In collaborative learning environments, when one student succeeds, the entire group benefits. Collaborative environments promote the active exchange of ideas, increase interest among the participants, and assist in development of other learning principles such as critical thinking and problem solving.[20]

There are many approaches to collaborative learning. A Wisconsin Center for Educational Research report provides Smith and MacGregor's set of assumptions about the learning process:[21]

- Learning is an active process whereby students assimilate the information and relate this new knowledge to a framework of prior knowledge
- Learning requires a challenge that opens the door for the learner to actively engage peers, and to process and synthesize information rather than simply memorize and recite it
- Learners benefit when exposed to diverse viewpoints from people with varied backgrounds
- Learning flourishes in a social environment where conversation between learners takes place. During this conversation, learners create shared frameworks and negotiate meanings
- In the collaborative learning environment, the learners are challenged both socially and emotionally as they listen to different perspectives, and are required

to articulate and defend their own ideas. In so doing, the learners begin to create their own unique conceptual frameworks instead of relying on an expert's or a text's preexisting framework

In a collaborative learning setting, learners have the opportunity to converse with peers, present and defend ideas, exchange diverse beliefs, question other conceptual frameworks, and become actively engaged. The lecturing, listening, and note-taking format experienced in many classrooms today will probably not disappear entirely in collaborative classrooms. At times the lecture format will be necessary to complement other methodologies based around discussions, problem solving, and other active learning techniques. The goal of establishing a collaborative learning environment should remain constant regardless of the specific format chosen to deliver the content. That goal is to shift learning from an instructor-centered model to a student-centered model.[21]

Collaborative learning processes can be incorporated into a typical class in a variety of ways. Some require a thorough preparation, such as a long-term project, while others require less preparation, such as posing a question during lecture and asking students to discuss their ideas with their neighbors. Some examples of collaborative learning techniques provided by Brown and Lara are:[22]

- **Brainstorming** – Designed to generate a large number of ideas in a short period of time. Often structured as an activity around a roundtable involving the sharing of ideas about a question or situation from the instructor.
- **Case Studies** – Educational stories used to teach students about their field and typically written as dilemmas that give a personal history of an individual, institution, or business faced with a problem that must be solved. Student groups are formed to discuss the issues and form solutions.
- **Dyadic Essays** – Groups of students create an essay question on information previously covered in the course and compose the answer to the question as well.
- **Group Reports** – Student groups research and report on a given topic.
- **On-line Collaboration** – Participants create their own learning through thoughtful conversation and collaboration, guided by a knowledgeable instructor.
- **Problem Solving** – A task or problem to be studied and the criteria for measuring the accomplishment of the task are provided to student groups.
- **Teamwork** – A collaborative learning technique that simulates a workplace experience to prepare students for workplace situations in which students will, undoubtedly, be asked to work in teams at some point.

For more information on collaborative learning see the Texas Collaborative for Teaching Excellence website at
http://www.texascollaborative.org/Collaborative_Learning_Module.htm

Critical Thinking, Problem Solving. As mentioned in the definition section of this Guide, critical thinking has become a central term to describe a process that covers

many aspects of cognitive application to problem solving. It involves functions such as questioning, reasoning, analyzing, conceptualizing, evaluating, comparing, reflecting, and deciding. It also includes an examination of all associated information and thoughts generated through those cognitive functions in order to impact a person's beliefs, opinions, or positions, and ultimately to answer questions, solve problems, or determine a course of action. For purposes of classroom instruction, the key is to determine how to structure a class with methods involving the use of critical thinking and problem solving in a way that enhances the learning experience and ultimately delivers the lesson concepts and content to students. Instructional methods using problem solving exercises not only deliver content but also promote the use of critical thinking in learners.

The most common approach to information delivery in the classroom is through the use of lectures. Lecture based formats do not, however, often lend themselves to adult learning principles such as the use of active learning through problem solving and critical thinking as students do have much opportunity to actively respond or interact with the subject matter as it is dispensed by the lecturer. The traditional use of a lecture based format is often adopted by instructors for a number of reasons; the most common reasons include a familiarity of the format through personal educational experiences and because a one-way, teacher-centered approach to content delivery can be less demanding on the instructor.[23]

Unfortunately, a deeper understanding and retention of the subject content is missed when the use of lectures ignore many principles of adult learning. Delivery of information through lectures limits the use of classroom discussions, critical thinking, and collaborative learning and relies heavily on a student's recollection of material through the use of rote memorization. Content provided by an instructor through sequential lecturing is not often internalized as those learned through self discovery by students discussing topics critically. Lecture based approaches place the student in a passive rather than an active role as students sit and listen to the instructor do the talking, questioning, and thinking for them.[23]

Adoption of active learning principles in the classroom can enhance the learning experience for both teachers and students. Most importantly, it involves the use of adult learning principles that take into account the unique ways that adult students learn best and fosters the use of critical thinking skills. In order to implement these concepts in the classroom, instructors will need to prepare themselves to use techniques that may not currently be familiar to them and techniques that allow students to discover concepts and information rather than ones where the instructor explains all the material. Some exposure of specific content is often necessary to gain some knowledge of the subject prior to engagement of some adult learning techniques. This can often be given to the students through pre-class readings or overview lectures. Deeper understanding and internalization of the content is fostered when students use that up front material in their discussions and problem solving exercises.[23]

Duron, Limbach, and Waugh outline a 5-step framework applicable for any classroom or training setting that will effectively move learners toward critical thinking. Their framework incorporates existing adult learning theory and best practices for encouraging cognitive development and creating effective learning environments. Their ideas are geared towards moving student learning in the classroom from a lecture-based approach to an active-learning environment. Their *5-Step Model to Move Students toward Critical Thinking* includes:[23]

- **Step 1: Determine learning objectives**
  - Define behaviors students should exhibit
  - Target behaviors in higher order thinking

- **Step 2: Teach through questioning**
  - Develop appropriate questions
  - Employ questioning techniques
  - Encourage interactive discussion

- **Step 3: Practice before you assess**
  - Choose activities that promote active learning
  - Utilize all components of active learning

- **Step 4: Review, refine, and improve**
  - Monitor class activities
  - Collect feedback from students

- **Step 5: Provide feedback and assessment of learning**
  - Provide feedback to students
  - Create opportunities for self-assessment
  - Utilize feedback to improve instruction

For more information on critical thinking see referenced article by Duron, Limbach, and Waugh available at: http://www.isetl.org/ijtlhe/pdf/IJTLHE55.pdf.

Job Application Relationship. Adults are mostly driven by internal motivation and the desire for self-esteem and goal attainment. Adults approach learning from the standpoint of how what they learn can personally benefit them in their current or future situation. Adults desire learning to be task-oriented and correlated with their careers as opposed to being information they may find hard to use outside the classroom. In doing this, they often will learn only the content that applies to activities that will help them perform useful tasks. Providing information in a contextual format is key to effective learning for the adult student.[24]

Before eagerly exerting effort into learning something, adults often want to know why they need to learn some new content.[25] In adult learning, the first task of the teacher is to help learners become aware of their need to know. Adults are motivated to learn to the extent in which they perceive that the knowledge in which they are acquiring

will help them perform a task or solve a problem that they may face in real life. Facilitators must help adults become aware of their "need to know" and make a case for the value of learning and how it can benefit them in their careers. Adults are responsive to some external motivators (e.g., better job, higher salaries), but the most potent motivators are internal (e.g., desire for increased job satisfaction, self-esteem).

Some examples of how instructors may link classroom content to the students' job or real-world include:

- Beginning the instruction by describing as many examples as possible of how the content relates to the students' work place or real-world
- Making use of personal, practical experience that involves the subject content
- Using examples during instruction that are relevant to the students' occupation and past experiences in the class
- Having students share their own experiences or views of how the content relates or could relate to their environment
- Having students share an example of how the content relates to real-world situations as an assignment [26]

Knowledge Transfer. Transfer is the ability to extend knowledge or concepts learned in one context to a new context or situation, which increases the value of the learning experience. For transfer to occur, students cannot merely memorize a vast majority of the information but must understand what they have learned in order to visualize how the information applies to other situations. Memorizing a set of facts or a fixed set of procedures limits the student's ability to transfer newly learned knowledge.[28]

The idea of knowledge transfer, in simple terms, is when a person takes something learned in one setting (such as in the classroom) and applies that knowledge to a new setting (such as a real world activity or new situation). In the classroom, an instructor may even help students learn new material by presenting them with problems that allow for newly presented material to be applied through practical exercises. In that case, the student has both practiced the transferring of knowledge and reinforced the new knowledge gained. Students are then better equipped to apply their newly gained classroom knowledge to real world situations by using it to enhance current activities or in new unfamiliar situations in order to improve operations, solve problems, or make decisions.

For adult learners, effective transfer of knowledge is facilitated when new material is organized around authentic problems and situations encountered outside the school setting. However, instruction of new material in only one context can limit a student's ability to transfer that knowledge to other settings and so instructors should provide students the opportunity to apply their newly learned skills to multiple situations in the classroom and outside the classroom, allowing them to determine the outcome of each application.[27]

Darling-Hammond and Austin discuss ideas for facilitating knowledge transfer in the classroom. Some of their ideas include:[27]

- Building on students' pre-existing knowledge to create links between new information and old
- Including problem-solving activities in the curriculum that require using newly learned material in a context other than how it was presented
- Providing discussion opportunities that involve using the new material in different context
- Having students discuss the similarities and differences of two separate events that share a common fundamental base

For more information on knowledge transfer, see articles by Darling-Hammond & Auston available at http://www.learner.org/courses/learningclassroom/support/11_learning_transfer.pdf and Bransford, Brown, & Cocking available at http://www.nap.edu/openbook.php?record_id=9853&page=51.

Questioning Techniques. Effective questioning revolves around questions that help students learn, not just around trying to determine if students have learned a specific answer to a specific question. A large part of adult learning in modern classrooms should revolve around the use of effective questioning techniques to help accomplish this objective. An effective questioning technique is one of the most useful tools available to instructors to help them become more of a facilitator rather than an avenue for one way content delivery.

To further understand effective questioning, the instructor must understand what type of questions should be asked and the reason for asking them. The types of questions that can be asked are sometimes grouped according to a classification of learning objectives known as Bloom's Taxonomy. Bloom's work was first published in 1956 describing a hierarchy of increasingly complex intellectual skills that revolve around cognitive functions including knowledge, comprehension, and critical thinking skills. Armstrong describes Bloom's Taxonomy as including six separate categories of cognitive functions:[29]

- **Knowledge.** Revolves around memory, the recall of data or information of previously learned material including facts, terms, basic concepts, and answers.
- **Comprehension.** Involves determining the meaning and understanding of facts and ideas through cognitive actions such as comparing, interpreting, translating, and extrapolating.
- **Application.** Involves the use of knowledge, techniques, or concepts in new situations to answer questions or solve problems.
- **Analysis.** Involves breaking up or separating ideas, concepts, or information into parts to determine causes or motives behind the facts.

- **Synthesis.** Involves combining different pieces of information together in new ways to form new meanings or alternative solutions.
- **Evaluation.** Involves making judgments and defending opinions about ideas, positions, or products.

Questions posed to students in the classroom can be developed around these categories depending upon the results desired by the instructor. For example, does the instructor simply want to know whether or not a student can recall certain facts, or is the goal to have the student learn something through a discovery process using critical thinking skills, such as analysis or evaluation? In this instance the difference would be similar to asking either "What kind of wood is commonly used to make lumber?" or "Based on the different characteristics between pine and oak, what would be the most suitable wood for making fine furniture, and how do those characteristics support your choice?" The purpose behind questions in the classroom will often vary during the course of a particular instructional period depending on what the instructor is attempting to accomplish.

Some educators have classified questions into lower and higher cognitive questions. Lower cognitive questions involve knowledge and comprehension while higher cognitive questions involve the critical thinking skills (application, analysis, synthesis, and evaluation). While not always the case, the general consensus among educators is that lower cognitive questions are most beneficial for younger students where delivering knowledge and facts is often the goal. As students become more mature, higher level cognitive questions should become more frequent. Adult learning theory suggests that questions developed around the use of critical thinking skills should be the norm for most adult classrooms.

The following list from the Illinois State University Physics Department provides some considerations in planning the use of effective questioning techniques. [30]

- **Prepare your students for extensive questioning**
  o Show students that questions seek clarification and elaboration their ideas
  o Use questioning to promote critical thinking
  o Question when necessary to addresses misconceptions

- **Use both pre-planned and emerging questions**
  o Pre-plan a number of questions to help achieve the instructional goal
  o Use questions derived from discussions to effectively guide the discussion toward preplanned discoveries

- **Use a wide variety of questions**
  o Begin by asking divergent questions, and moving to convergent questions as the learning goal is approached
  o Ask questions that require a broad range of intellectual (higher and lower order) thinking skills

- o Use open-ended questions and avoid using simple YES or NO type questions that encourage answers without substantial thought

- **Avoid the use of rhetorical questions**
  - o Avoid the use of questions that merely seek affirmation of something stated previously such as: Right?, Correct?, Okay?, and Yes?

- **State questions with precision**
  - o Avoid forming questions with poor wording that can result in confusion
  - o Avoid using rapid-fire or multiple questions related to the same topic which can add to student confusion when they do not have a chance to formulate opinions and responses
  - o Repeat questions and explain them in different words when students don't understand

- **Pose whole-group questions often**
  - o Direct questions to the entire class and allow for individual responses
  - o Reinforce what is correct and seek additional details, clarification, and ask the student to justify a response
  - o Ask follow-up questions and redirect the question to the whole group

- **Use appropriate wait time**
  - o Encourage students to think about the response by allowing sufficient wait time before responding after posing a question and after the answer is given
  - o Use wait time to encourage everyone to think about the question and the response provided by the student
  - o Use wait times of 10 to 15 seconds or more for higher-order questions

- **Select both volunteers and non-volunteers to answer questions**
  - o Avoid always using the student who is first to raise his or her hand as it may leave many students uninvolved
  - o Use techniques such as a randomized approach to select student to respond

- **Respond to answers provided by students**
  - o Listen carefully to students as they respond
  - o Let students finish their responses before commenting
  - o Acknowledge correct answers, provide positive reinforcement, identify incorrect responses
  - o Ask for alternative explanations from other students
  - o Repeat student responses for the other students that did not hear the answer

- **Throw back student questions**
  - o Restate a student question and ask for their opinion or pose it to the entire class

- **Restate discussion goals**
  - Ask questions near the end of the lesson to determine whether or not the goal has been achieved
  - Identify areas in need of clarification through questioning.

For more information on Bloom's Taxonomy and effective questioning techniques see *Bloom's Taxonomy "Revised" Key Words, Model Questions, & Instructional Strategies* found at
http://www.cwsei.ubc.ca/resources/files/ClickerWorkshopMaterials/Bloom's_Taxonomy's-GREEN.pdf

Discussions. Discussions are an important aspect of adult learning. A classroom discussion provides the opportunity for students to better absorb and process information rather than obtain it through a one-way lecture from the instructor. There is an art to leading an effective discussion. When using discussions as a method of teaching, the role of the instructor becomes that of a facilitator rather than a lecturer. Facilitators design and facilitate the discussion of others, rather than simply conveying information. Discussions must be relevant to the topic and through facilitation the instructor must ensure the appropriate content is covered. The facilitator's goal should be to steer students in a direction that causes them to analyze the material and thoughts being presented in order to discover their own position or thoughts. Discussions should be designed to present students with situations that have some ultimate objective as the goal such as problems requiring a solution, tasks requiring completion, judgments requiring a consensus, or decisions requiring an answer.[31]

In planning to use a discussion as part of the planned classroom activities, instructors must first decide what they want the students to get out of the discussion, or in other words, the ultimate goal they wish to achieve. Planning becomes much easier once this goal is established. Planning should go further than simply determining what the instructors want the students to know; it should also include what the students should be able to do with the information. Understanding the ultimate goal or objective for using the discussion will help determine what options the facilitator may use to help channel the discussion toward that objective. Organization of classroom discussions may be accomplished in a variety of ways depending on how the facilitator envisions the discussion will unfold. Some examples include splitting students into small sections with discussions held in each group, choosing to split the class into two sides for a debate, or holding a discussion with the entire class.[31]

The design of planned discussions should leave time to wrap up and summarize the discussion points or discoveries at the end of the period. One of the most important parts of a discussion is the time used to summarize and synthesize the information obtained. Much of the learning in discussions happens during debriefing. As a general rule for planning purposes, approximately one-third of the total discussion time should be set aside for debriefing. Indiana University suggests that during the discussion debriefing, the instructor can:[31]

- Pick a student to report from each group (assuming students have been divided into subgroups)
- Correct any incorrect notions
- Present any important points that students neglected

Some of the biggest fears an instructor may have about using discussion techniques is the possibility that the discussion will be too enthusiastic, will not remain civil, will drift too far off topic, or will be monopolized by the same student(s) repeatedly. Before beginning, instructors must develop ground rules as a class. Students should be reminded that interrupting, showing disrespect, or monopolizing the conversation is not appropriate behavior for classroom discussions. Students should never be humiliated in front of the class; instead, inappropriate discussion related conduct should be dealt with respectfully and fairly with all students.[31]

To help create discussion in the classroom, Indiana University provides instructors with some strategies to consider in helping to stimulate discussion.[31]

- **Delay the problem-solving or answering portion** of the discussion by steering the discussion away from solutions until the rest of the discussion has had time to develop
- **Shift points of view** through effective questioning and turning questions back to students or by interjecting other possibilities to further expand the discussion
- **Shift levels of abstraction** by requesting further clarification or supporting thoughts
- **Ask for benefits/disadvantages of a position** from all sides
- **Shift time frame by** asking "what if" rather than just "what's next" questions to examine how things could be different (e.g. "What if something had happened earlier? How would that have changed the outcome?")
- **Shift to another context** to further examine material in another setting
- **Ask follow-up questions** to continue discussion, clarify, and further examine the situation
- **Point out and acknowledge differences in discussion** to alert students to different points of view

For more information on discussion techniques, see referenced material available at: http://citl.indiana.edu/resources/teaching-resources1/teaching-handbook-items/discussion.php.

Use of Technology. The integration of technology in the modern adult classroom should not be viewed as a separate event, but rather as a tool used routinely to assist in the learning experience of the students. The challenge for instructors is to find innovative ways to incorporate technology into the curriculum that enhances learning without distracting from the intended purpose of the instruction. Lack of personal

experience with technology presents an additional challenge for many instructors. In order to add technology-based activities and projects into their classroom curriculum, instructors first must learn to use the technology-based tools themselves and then determine how to properly and effectively incorporate them into the classroom.

Since today's technology options and digital-based equipment are vast with many diverse alternatives, for the purposes of this Guide, only a generalization of thoughts that apply to all types of technology is provided. While technology options are improving daily, often budget and availability of equipment limit the instructor's choice for implementation. However, it is also common for technology to be available for use but not be incorporated into the classroom due to the instructor's lack of familiarity with the equipment or a lack of understanding of how the technology can be innovatively employed to aid instruction.

It is not uncommon for technology to be introduced into a classroom for the sake of modernizing the classroom without giving proper attention to how it should be incorporated to enhance learning. Technology can become a distraction if the equipment is not working properly, if those using it are not properly trained, or if for any reason the use of it becomes more cumbersome than the potential benefit it provides. Ultimately, the goal for integration of technical equipment into classroom instruction should be to enhance content delivery with a synergistic effect on the learning experience.

In order to accomplish this goal, instructors will need to educate themselves on the equipment to include its' intended uses, the technical aspects of how to operate it, and how it can be effectively used to enhance learning. Practice with the equipment for familiarization is a requirement and testing of the electronics prior to class is necessary to ensure smooth operation and minimal disruption of instruction.

While considering use of technology in the classroom, instructors should create a clear vision of how their classroom with integrated technology would function. For each class, instructors should determine how technology fits in and how the learning objectives could be aligned with the appropriate technical tools available. To aid in the practical aspects of technology integration, Lorena suggests considering the following in preparing for its use:[32]

- Actively seek information from all available sources
- Learn from colleagues
- Sign up for technology based professional development courses
- Attend conferences and programs on use of technology for instruction
- Swap literature and share ideas, materials, and resources with other instructors
- Visit and observe other instructor classrooms to gain ideas
- Search online resources for ideas from other educators

- Look for information and ideas from technology journals and publications, online magazines and newsletters, online tutorials and videos, and other open content sources

Once a determination is made on what type of technology will be incorporated into the class, instructors should consider the following aspects of technology implementation provided by Lin:[33]

- Ensure that the equipment is working and up-to-date. Frustrations with slow internet connections and unreliable equipment are major deterrents to effective use of technology.
- Make sure technical support is available. This may be an IT person on staff to help set up computer and internet accounts and assist in projects or simply someone to help with any problems or special needs.
- Find out what students already know about the technology and what kinds of fears and concerns they may have about technology.
- Familiarize students with the technology before actually having them work with it. Let them know what the technology can do by having them master a few basic skills.
- If applicable, establish individual student email or other accounts and demonstrate the basic steps of how to access them.
- Show students how to access the tools that will be used such as the Internet, websites, Blackboard, articles and other kinds of information. Ensure they are aware of how to check for accuracy and validity.
- Consider the use of chat sessions for group and research projects using websites and email.

Instructional Methods. Effective teaching is described as a process involving instructional decisions based on material content and careful observation of student behavior in the classroom. Rather than a set of generic practices for content delivery, effective teaching not only involves selection of an appropriate instructional method, but also adjustments made to the chosen methods based on student comprehension. Effective teachers are constantly observing students' behavior to determine comprehension and adjust their instructional methods accordingly if necessary.[34]

In the modern adult classroom, the current trend is to move toward a "guide on the side" as opposed to a "sage on the stage." This move is due to extensive educational studies and theories on what motivates adults to learn and how they receive and retain new information. This instructional method moves further away from a lecture-based approach to a student-centered learning approach where the responsibility for learning shifts away from the instructor and toward the student. This is accomplished through teaching methods such as problem-centered discussions and exercises where students discover answers on their own rather than being told directly

by the instructor. In this context, instructors become more of a facilitator of the students' own self-learning rather than a lecturer.

Practical implementation of these instructional methods common to adult learning principles, but uncommon to many students, is not necessarily an easy task. As students move toward methods that involve activities where they direct their own learning, some students will not readily embrace the change. Instructors should be aware that as adult classrooms make this transition, there is often a notable resistance by some students. Students may initially struggle, complain, and become uncomfortable with the instructional methods. Some may be confused and intimidated by the role reversal and complain that facilitators are giving up their duties by forcing students to take responsibility and make judgments they are not equipped to make. Many students will not necessarily be pleased about methods that allow them to form their own opinions and judgments and would rather just be told what it is the instructor wants them to know. Instructors should be aware of this potential opposition and should aim to facilitate learning and systematically integrate new methods without requiring students to completely work independently up front.[14]

In his article "Instructional Approaches", Keesee describes how instructional methods can generally be grouped into five broad categories with each category containing numerous options. These categories, depicted in Figure 1, are:[35]

- **Direct Instruction** is highly teacher-directed and is usually deductive, meaning that instruction moves from the general (presenting rules, principles or laws) to specific examples or activities. It includes methods like drill and practice, explicit teaching or lectures.

- **Indirect Instruction** is more student-centered, taking into account the students' interest and curiosity. The teachers' role is more that of a facilitator or resource person. Examples of this method of instruction would include case studies, discussion or problem solving.

- **Experiential Learning** is inductive, learner centered, and activity oriented. It focuses more on the process than on the product and utilizes methods such as field trips, experiments and role play.

- **Independent Study** methods include computer assisted instruction, reports or homework. As the name suggests, it is work that the student does independent of the teacher but which may be done in conjunction with other students.

- **Interactive Instruction** relies on discussion and sharing among students and uses such methods as debates, tutorial groups and brainstorming.

Direct Instruction

Instruction Skills Structured Overview

Explicit Teaching

Mastery Lecture Drill and Practice

Compare and Contrast Instruction Skills

Didactic Questions

Interactive Instruction

Debates Role Playing Demonstrations

Panels Brainstorming

Peer Practice Discussion Guides for Reading, Listening, Viewing

Laboratory Groups

Co-operative Learning Groups

Problem Solving

Circle of Knowledge

Tutorial Groups

Interviewing Instruction Skills

Instruction Skills

Indirect Instruction

Problem Solving

Case Studies Inquiry

Reading for Meaning

Reflective Discussion

Concept Formation

Concept Mapping

Concept Attainment

Cloze Procedure

Instruction Skills

Independent Study

Essays

Computer Assisted Instruction

Reports Learning Activity Package

Correspondence Lessons

Learning Contracts

Homework

Research Projects

Assigned Questions

Learning Centers

Experiential Learning

Field Trips

Conducting Experiments

Simulations Games

Focused Imaging

Field Observations

Role Playing Synectics

Model Building Surveys

Instruction Skills

Figure 1. Instructional Methods. Adapted from "Instructional Approaches" by Keesee, 2011, *Teaching and Learning Resources*.[35]

When determining what type of instructional method to use among the many choices available, it may help instructors to narrow the choices by first answering questions regarding the nature of the instructional content. While no clear relationship exists that demands use of a particular instructional method to certain answers, an analysis of the combined answers in relation to adult learning concepts can help steer instructors toward a particular method, or methods, and away from others. As an example, content with which students are totally unfamiliar would probably need to be introduced by some initial method prior to having students offer their opinion in a group discussion. A block of instruction that requires reinforcement of a concept or process is often more suitable for problem-solving, hands-on, active participation methods. Instructors must first be familiar with adult learning concepts in order to relate the

answers to the following instructional questions to the various instructional methods. In a group presentation presented on The Psychology of Education, the following list of questions were provided for instructors to consider when choosing a particular instructional method.[36]

- **The Desired Outcomes or Experiences**
  - o What is the goal associated with this learning event?
  - o What is the desired learning or behavioral outcome?
  - o Which method of instruction will best contribute to goal attainment?
  - o What level of understanding or retention is required?

- **The Curriculum Content and Methodology**
  - o What is the nature of the content of the lesson?
  - o Is it abstract and theoretical or concrete and practical?
  - o What is the scope and limitation of the method?
  - o Is there a best answer or approach suggested by the content?
  - o Is diversity of perspective or multiple considerations of value?

- **The Target Audience / The Learner or Student**
  - o What are the needs, interests, and strengths of the learners?
  - o What are the different learning styles and learning rates?
  - o How ready are the students to assume responsibility for learning?
  - o What is their level of motivation to learn?
  - o What is at stake for them?
  - o What prior knowledge, skills and experience or background do the students bring?
  - o What do they believe…about self, learning, subject, teacher, etc.?
  - o How tolerant are they of new learning activities?
  - o How confident are they in this learning situation?
  - o What are the particular dynamics of the group?
  - o What is the age, sex, socio-economic background, and racial / ethnic background of the group?
  - o How many students are there?

- **The Capabilities and Beliefs of The Teacher**
  - o What is my personal teaching style and skills?
  - o What constraints must I work within?
  - o What are my personal philosophy and beliefs?
  - o What is my background and level of experience?
  - o What is the extent of my knowledge of the particular teaching method?

- o Do I believe this method is important, valuable, and appropriate?
- o Am I willing to try new things?

- **The Environment or Context**
  - o What are the possibilities or limitations presented by the physical environment?
  - o What is the ethos or climate of learning?
  - o Where and when will these skills and knowledge be applied?
  - o What is the relationship among individuals or groups within the class?

- **The Resources and Logistics**
  - o What time is available to prepare?
  - o What time is available to learn?
  - o What time is available to teach?
  - o What cost is involved with this method, and is it cost-effective?
  - o What resources are available?
  - o Do I know how to use the available equipment?
  - o How many students are there?
  - o What and how flexible is the seating or furniture?

There are some attributes on which most educators tend to agree that describe a successful adult education facilitator. Lacefield describes successful facilitators as:[14]

- Viewing themselves as participating in a dialogue between equals
- Open to change and new experiences, seek to learn new activities
- Being genuine in entering into personal relationships with learners rather than consistent adherence to the prescribed role of the teacher
- Accepting the learner as a person of worth
- Having empathy (nonjudgmental understanding, both intellectual and emotional) for the learner's perspective

Verbal / Nonverbal Communication. One of the most important tools for a successfully managed classroom is the ability to communicate. In general terms, communication is the process humans use to send and receive messages enabling them to share their knowledge, thoughts, and attitudes with others.[37] Communication is both verbal and nonverbal. Picket states that According to the National Education Association, 82% of an instructor's communication with students is nonverbal.[38]

In an educational setting, verbal communication is clearly important to student learning. At the most basic level, students need to be able to adequately hear the instruction as well as what other students are saying. Correct enunciation and pronouncement of words may also influence whether or not students take the instructor

seriously.[38] However, hearing also needs to occur at a deeper level as well. Instructors should be conscious of what they say as well as how they say it. Periodic checks can ensure students understand what has been presented including content material, pending assignments, and other administrative information. Instructors should always double check to ensure students understand instructions and assignments. It is important for instructors to know their content well enough to speak clearly and confidently about the subject in order to be understood and to gain credibility with the students.

Often even more important than verbal communication in the classroom is nonverbal communication. Although we often identify communication with speech, nonverbal communication is communication without words. Nonverbal communication involves behaviors such as facial expressions, eyes, touching, and tone of voice. It also includes other factors that are not as readily apparent such as the way a person dresses, their posture and spatial distance between two or more people. Nonverbal messages communicated by an instructor can convey an even stronger message than a verbal one. Students respond to nonverbal messages sent by instructors in a variety of ways including forming judgments about their competence or character.[37]

Many nonverbal messages are often reactionary and difficult to control such as movements and gestures by the hands, arms, legs, and other parts of the body and face. Instructors need to be aware that gestures, body motions, and posture can communicate unwanted messages about true feelings that are hard to mask. Instructors should however, maintain control over more long-lasting expressions such as smiles or frowns. Whether unintentional or intentional, the human face is a key source of information for determining an individual's internal feelings and often interpreted as feedback from either students or instructors. A negative facial expression, such as a grimace, from an instructor to a student's statement or answer can indicate disapproval and severely damage the learning experience for that student and other witnessing the event. [37]

Body postures and movements can reveal a great deal about an instructor to the students and about the students to the instructor. A person's walk, stance, or the manner in which they sit can all affect the perception others have of that individual and can be indicators of self-confidence, energy, fatigue, or other status. An instructor that displays a lack of confidence or frustration with the course material through unconscious nonverbal behaviors may soon find that students' enthusiasm deteriorates and boredom soon sets in. Instructors can use nonverbal body language to help gauge whether or not students are keeping pace with the class and comprehending the material presented. Nonverbal messages from students such as slouching can indicate boredom or tiredness whereas a student leaning forward or sitting erect in the seat may indicate attentiveness. Instructors should be attentive to facial expressions and nonverbal communication to help determine whether or not to slow down, speed up, or in some other way modify the presentation.[37]

Another type of facial expression is eye behavior. Eye behavior is often used to determine whether a student or instructor is open to communication. Students willing to share an opinion or answer a question will generally look at the instructor. In contrast, those that do not wish to be called upon will most often avoid eye contact. Visual contact with the instructor can also increase attentiveness. An instructor that looks directly at a distracted student while talking will often regain that student's attention. Through observation of student eye behavior, an instructor can often judge whether students are bored with the subject matter being presented. Students' eyes often signal listening and non-listening behaviors, thus transmitting subtle messages about their lack of attentiveness.[37]

One of the main preparations an instructor can make when considering their use of verbal and nonverbal communications in the classroom is to maintain an awareness of the different types of communication and the potential impressions, warranted or not, they can give a student. This is especially true for reactionary or involuntary types of communication that can unintentionally leave a negative impression and adversely impact the students' learning experience.

Tailored Learning. Tailored Learning is a methodology that allows broad course content to be adapted to meet the needs of individual learners. It suggests that a training event should be adaptable to accommodate the experiences and expertise of specific learners. Adaptable training events allow the learner to skip content that has already been mastered and focus on the non-mastered content. This reduces the amount of time learners spend completing content already mastered, while highlighting the content for non-mastered objectives.

In larger classrooms where instructor-to-student ratios are higher and one-on-one time with the instructor is less frequent, tailoring the curriculum to individual students becomes more of a challenge. Advances in educational technology alternatives may assist in tailoring to the learning needs of individuals depending on what equipment is available. Without the aid of technology assets, an individual instructor may often find that the time and resources needed for assessment and curriculum tailoring can be overwhelming. Even so, in the absence of these assets, instructors can still make informal assessments of individual student knowledge and experiences and apply what they find in the classroom in innovative ways.

Students, especially adult students, like to be credited for what they already know and often quickly lose interest when covering previously mastered material. Instructors may be able to find innovative ways to use a particular student's mastered knowledge to the benefit of other class members while giving that student an opportunity to gain a more in-depth perspective. Depending on the desired outcome, instructors may want to group students with similar knowledge levels of a particular subject and give those that have mastered the content advanced assignments. Or the instructor may want to spread those individuals between groups to assist other class members. Whatever the case, instructors need to be aware of their adult students' prior knowledge and the potential impact it may have on their motivation and learning experience.

Curriculum must be inclusive in order to be relevant to learners. When covering a subject, the instructor must find ways to meet the challenge of including both the experienced and inexperienced student into the learning environment. The following is a list of useful information that supports creating an inclusive tailored learning environment:[14]

- Students are positioned differently in relationship to each other and to the knowledge being acquired. All learners do not bring with them the same ability to think critically, analyze results, etc.
- Learners bring different experiences to the classroom both as individuals and as members of particular social groups. These experiences can be used as a basis of learning and assessment.
- Individuals bring multiple perspectives to a learning situation and often seek opportunities to share them.
- A healthy environment can be created which allows for students to disagree with the instructor or other students. Disagreement sparks discussion, moves students toward deeper thinking, and helps account for individual student experiences.

Tailoring instruction to meet the needs of individual students can be a challenge in a large classroom. However, instructors that seek to move in the direction of tailoring can benefit by keeping the following thoughts in mind.

- Instructors that do not know a student's background, experiences, level of applicable knowledge to the learning content and motivational basis for being in the classroom will find it hard to tailor learning to that individual.
- If the vast majority of the class is at one level of understanding and the minority at another, the class may be better served by tailoring to the majority and assisting the minority in other ways.
- Technology assets can assist greatly in tailoring learning.
- When possible, instructors can plan to have multiple events occurring simultaneously in the classroom that can better account for different student needs.
- Instructors may also consider using students more knowledgeable and experienced in the curriculum to assist others.

Student Mistakes. If students have a fear of making mistakes in the classroom, their learning experience can be severely hindered. Adult learning methods that involve creative thinking and self discovery of information are a recipe for alternative thinking that can sometimes lead to incorrect concepts or answers. The discovery process, however, is valid and mistakes can be used in a positive way conducive to learning. In an environment where mistakes are seen negatively, students unsure of an answer are commonly afraid to offer an opinion and often tend to ask the instructor rather than try different solutions that might be wrong. Success in the classroom that is measured

merely on test results tends to stifle the positive learning experience that can be gained by student mistakes. Unless both students and instructors perceive errors as a natural part of the classroom learning experience, mistakes cannot be used to enhance learning and the emphasis incorrectly leans more towards test results rather than on the learning process.[39]

Errors need to be viewed by the student as an acceptable occurrence in the classroom that normally coincides with the learning experience. The goal of instructors is to get adult learners to understand and accept that learning comes after mistakes are made and students have a chance to reflect, analyze, and examine their errors. Subsequent to mistakes, opportunities should be provided for students to improve their understanding of content and correct their academic work through methods that encourage learning and foster learning goals. Burden summarizes the three key elements of student mistakes as:[40]

- Treat errors and mistakes as a normal part of learning
- Use mistakes as a way to help students check their thinking
- Provide opportunities for improvement or for redoing assignments

If students make errors, press them to think. Students need feedback to help improve their thinking and understanding of the content. Feedback and expectations for lesson participation can stimulate students to think and contribute their thoughts and opinions during classroom instructions. Blumenfeld offers the following ways to press students to think.[40]

- Require students to explain and justify their answers
- Prompt, reframe the question, or break it into smaller parts when students are unsure, and probe students when their understanding is unclear
- Monitor for comprehension, rather than procedural correctness, during activities
- Encourage responses from all students
- Supplement short answer assignments with questions that require higher levels of student thinking

Time Management. Time management is critical to both student achievement and attitude toward learning. Careful management of time in the classroom is required in order to increase learning opportunities for students. Time management includes more than just the pace (speed of movement of classroom activities) in which the instruction proceeds. It is also closely associated with student progression. The pace needs to be appropriate, but progression, including comprehension and deeper understanding, needs to be monitored along with movement through the course material. Instructors need to be able to not only move the instruction along at the appropriate pace and cover the material, but also able to alter the pace to accommodate student comprehension. Students need to make cognitive progress as the instruction continues. Cognitive progress is a systematic progression of student understanding and comprehension of

material content from a lower order of thinking to a higher order of thinking. It involves a deeper understanding of the material and concepts presented. Instructors proficient in time management increase or decrease the pace of instruction through a constant determination of student comprehension and cognitive progression.[41]

> "Effective time management in the classroom is one of the keys to engaging students in successful learning. The process starts by planning carefully before the lesson, not just making sure that the routines and resources are in place, but by thinking through the lesson itself. It's very easy for instructors to think in terms of what they must do during the lesson, but it is smarter classroom time management to plan what the students must do."[41]

In planning for classroom activities, instructors need to have an understanding of how much time they plan to allocate toward each type of activity. They should keep in mind the different type of times available as described by Wong and Wong and cited by McLeod, Fisher and Hover.[42]

- **Allocated time** - The total time for teacher instruction and student learning
- **Instructional time** - The time teachers are actively teaching
- **Engaged time** - The time students are involved in learning
- **Academic learning time** - The time students spend demonstrating comprehension of a skill or content

Students learn best when actively engaged in completing a task. Customarily, the predominant portion of classroom instruction is dominated by the instructor delivering content. According to Wong, to increase the learning experience for the student, instructors should increase the amount of time a student spends actively working.[42] Lesson plans should contain estimates of roughly how long each learning activity is intended to last and what type of time (instructional, engaged, academic learning) is allocated for each portion. In practice, learning may not fit easily into the time allotted blocks. A better approach is often "to see lesson planning as covering a series of lessons and planning to fill the available time blocks with whatever is needed to cover the learning in a coherent way."[41] However, learning is not simply a series of events but a process toward an ultimate goal. Instructors need to be more cognizant of the goals and learning process as opposed to strict adherence to block lessons. Alert instructors can move quickly through content that students seem to grasp easily allowing more time on difficult areas. Instructors must know the goal of each learning activity and while ensuring an appropriate amount of time is given to a particular activity, the instructor must also be able to judge when the objective has been met regardless of whether students have completed every detail of a project. The aim is to engage students effectively in the allotted time in order for them to gain the appropriate knowledge desired through active learning.

Assessment and Monitoring

Student assessment in the classroom is typically thought of as formally testing the knowledge of students in order to assign grades or scores as an indication of what a student knows or does not know at a particular point in time. These type **summative assessments** have little to do with the learning process itself and more to do with gauging a student's knowledge against a particular standard. They have a final test quality to them that focuses on grading what students have already learned. Much more integral to the actual learning process is what is known as **formative assessment**. Formative assessments are diagnostic snapshots of where one stands at a particular point in the middle of a process with a forward-looking, process-improvement quality aimed at improving the learning experience. Formative assessments are associated with "checks on learning.".While both types of assessments are important aspects of classroom activities, formative assessments are part of the instructional process geared toward helping students learn rather than grading them on what they know.

> "When incorporated into classroom practice, they (formative assessments) provide the information needed to adjust teaching and learning while they are happening. In this sense, formative assessment informs both teachers and students about student understanding at a point when timely adjustments can be made. These adjustments help to ensure students achieve targeted standards-based learning goals within a set time frame."[43]

> "Using assessments *for* learning, rather than assessments strictly *of* learning, is particularly helpful when one considers today's rapid-paced and frequently reduced face-to-face classroom time."[44]

Using assessments to aid in the learning process, as opposed to strictly gauging performance, assists in calming the fears of adults concerned about their performance by helping to establish a comfortable learning environment.[44] While administration of summative assessments, often directed and standardized, will certainly occur in the classroom, the assessments conducted as discussed in the paragraphs below are concerned with formative assessments associated with the learning process.

Pre-Assessment of Student Knowledge. Pre-assessment plays a critical role in the ability to differentiate instruction. Pre-assessments are administered before instruction in order to gain an understanding of what students know, understand, and are able to do. It allows the instructor and students to discover what students already known about a specific topic or subject. It is critical to recognize prior knowledge so that students can engage in questioning, formulating, thinking, and theorizing in order to construct new knowledge appropriate to their level. Without pre-assessment, the preparedness of students for new learning and the specific learning differences among students is not known. Pre-assessment is a way to determine what students know about a topic before it is taught and is used to: [45]

- Make instructional decisions about student strengths and needs

- Determine flexible grouping patterns
- Determine which students are ready for advanced instruction

Pre-assessments can significantly benefit the instructor in planning the efficient use of available classroom time.[44] Understanding the students' prior knowledge levels and challenges up-front can help reduce frustrations in the classroom for both the instructor and students. Pre-assessments can be used to shape the instructional periods prior to the start of class and increase the students' learning experience. Pre-assessments can help the instructor: [45]

- Differentiate instruction
- Guide whole-group instruction
- Plan learning activities that address varying levels of readiness
- Determine which students have/have not achieved mastery of specific objectives
- Identify problems that might cause students difficulty with mastery of an objective
- Form flexible groups
- Determine master level of individuals or small groups

Pre-assessments may be conducted formally or informally. Time, resources, and opportunity will often guide what types of pre-assessments are possible. Some considerations for pre-assessment strategies provided by The Totally Tremendous Teachers website include:[45]

- Formal Pre-assessments
  - Paper/pencil, software, or online formats
  - Written responses
  - Student demonstrations
  - Student interviews

- Informal Pre-assessments
  - Observations
  - Conversations
  - Directed questions

If time, resources, and opportunity exist, instructors should strongly consider the use of an online pre-assessment technique. Online pre-assessments allow instructors easy access to the information provided by the students. Traditional assessment methods of student knowledge and skills can be time-consuming, difficult to implement, usually must be delayed until students attend class, and can take valuable time away from other classroom activities. Online assignments can be accomplished before the first day of class and can give the instructor an idea of student knowledge prior to actually beginning the instruction. One of the most useful pieces information that can be gained by pre-assessments is a look at the experience level of each student.[44]

Student Comprehension. Assessments help gauge a student's comprehension of the material presented. Continual use of assessments throughout the learning process is critical in order to direct the instructor and student where to go next. Periodic checks on student comprehension using various formative assessment techniques are necessary to adjust instructional strategies to meet student needs. Classroom assessments involve both a set of techniques and the instructor's approach to their purpose and use. For instructors, frequent use of classroom assessment techniques (CAT) can:[46]

- Provide short-term feedback about the day-to-day learning and teaching process at a time when it is still possible to make mid-course corrections
- Provide useful information about student learning with a much lower investment of time compared to tests, papers, and other traditional means of learning assessment
- Help to foster good rapport with students and increase the efficacy of teaching and learning
- Encourage the view that teaching is a formative process that evolves over time with feedback

Students may also benefit from the use of CATs. For students, CATs can:[46]

- Help them become better monitors of their own learning
- Help break down feelings of anonymity, especially in larger courses
- Point out the need to alter study skills
- Provide concrete evidence that the instructor cares about learning

There are many sound classroom instructional techniques and strategies that instructors may use for the purpose of gathering information on student learning. The key is not just to collect information on student learning but also to apply the information gained in a formative way. In other words, instructors will use formative assessments as part of their instructional process, gain information about student comprehension and progress, and then adjust subsequent instructional periods to improve the learning experience.

Some of the instructional strategies that can be used include: [43]

- Creating clear expectations by setting criteria and goals with students to engage them in instruction and the learning process. In order to be successful, students need to understand and know the learning target/goal and the criteria for reaching it.
- Making observations beyond simply walking around the room to see if students are on task or need clarification. Observations assist teachers in gathering evidence of student learning to inform instructional planning.

- Embedding questioning strategies during lesson planning. Asking better questions allows an opportunity for deeper thinking and provides teachers with significant insight into the degree and depth of understanding. Questions of this nature engage students in classroom dialogue that both uncovers and expands learning.
- Using self and peer assessments to help create a learning community within a classroom. When students have been involved in criteria and goal setting, self-evaluation is a logical step in the learning process. With peer evaluation, students see each other as resources for understanding and checking for quality work against previously established criteria.

To effectively use a CAT in the classroom, instructors should:[46]

- Decide what they want to learn from a classroom assessment
- Choose a CAT that provides that feedback, is consistent with the teaching style, and can be easily implemented in the class
- Explain the purpose of the activity, then conduct it
- Review the results after class and decide what changes, if any, should be made
- Let the students know what was learned from the CAT and how the information will be used

Table 2 provides sample CATs for consideration.[46]

Name:	Description:	What to do with the data:	Time required:
Minute paper	During the last few minutes of the class period, ask students to answer on a half-sheet of paper: "What is the most important point you learned today?"; and, "What point remains least clear to you?". The purpose is to elicit data about students' comprehension of a particular class session.	Review responses and note any useful comments. During the next class periods emphasize the issues illuminated by your students' comments.	Prep: Low In class: Low Analysis: Low
Chain Notes	Students pass around an envelope on which the teacher has written one question about the class. When the envelope reaches a student he/she spends a moment to respond to the question and then places the response in the envelope.	Go through the student responses and determine the best criteria for categorizing the data with the goal of detecting response patterns. Discussing the patterns of responses with students can lead to better teaching and learning.	Prep: Low In class: Low Analysis: Low

Name:	Description:	What to do with the data:	Time required:
Memory matrix	Students fill in cells of a two-dimensional diagram for which instructor has provided labels. For example, in a music course, labels might consist of periods (Baroque, Classical) by countries (Germany, France, Britain); students enter composers in cells to demonstrate their ability to remember and classify key concepts.	Tally the numbers of correct and incorrect responses in each cell. Analyze differences both between and among the cells. Look for patterns among the incorrect responses and decide what might be the cause(s).	Prep: Med In class: Med Analysis: Med
Directed paraphrasing	Ask students to write a layman's "translation" of something they have just learned -- geared to a specified individual or audience -- to assess their ability to comprehend and transfer concepts.	Categorize student responses according to characteristics you feel are important. Analyze the responses both within and across categories, noting ways you could address student needs.	Prep: Low In class: Med Analysis: Med
One-sentence summary	Students summarize knowledge of a topic by constructing a single sentence that answers the questions "Who does what to whom, when, where, how, and why?" The purpose is to require students to select only the defining features of an idea.	Evaluate the quality of each summary quickly and holistically. Note whether students have identified the essential concepts of the class topic and their interrelationships. Share your observations with your students.	Prep: Low In class: Med Analysis: Med
Exam Evaluations	Select a type of test that you are likely to give more than once or that has a significant impact on student performance. Create a few questions that evaluate the quality of the test. Add these questions to the exam or administer a separate, follow-up evaluation.	Try to distinguish student comments that address the fairness of your grading from those that address the fairness of the test as an assessment instrument. Respond to the general ideas represented by student comments.	Prep: Low In class: Low Analysis: Med
Application cards	After teaching about an important theory, principle, or procedure, ask students to write down at least one real-world application for what they have just learned to determine how well they can transfer their learning.	Quickly read once through the applications and categorize them according to their quality. Pick out a broad range of examples and present them to the class.	Prep: Low In class: Low Analysis: Med
Student-generated test questions	Allow students to write test questions and model answers for specified topics, in a format consistent with course exams. This will give students the opportunity to evaluate the course topics, reflect on what they understand, and what good test items are.	Make a rough tally of the questions your students propose and the topics that they cover. Evaluate the questions and use the good ones as prompts for discussion. You may also want to revise the questions and use them on the upcoming exam.	Prep: Med In class: High Analysis: High (may be homework)

Table 2. Classroom Assessment Techniques. Adapted from "Sample Classroom Assessment Techniques", Center for Innovative Teaching and Learning, Indiana University.[46]

Student Involvement. In order to remain actively involved in the learning process, students need to be given authentic, meaningful curriculum.[47] Instructors must actively involve the participants in the learning process and should encourage students to become active participants, not passive learners. Instructors should constantly monitor student participation and learn how to determine when a student is not actively engaged. Most often this can be determined by observing student silence, facial expressions, body language, responses to questions, or other similar classroom behavior. The challenge then becomes how to effectively reengage the student in order to increase the potential for a better learning experience.

The use of problem-solving exercises, case studies, role-playing scenarios, and other active events are excellent avenues for encouraging student involvement. Use of effective questioning and discussion techniques will also facilitate student involvement. Discussions can allow students the opportunity to express ideas and opinions in a non threatening format.[48]

When using questions to foster student involvement, instructors should remember that students need time to analyze questions and formulate responses. Using open-ended questions will help facilitate discussions and student involvement. Instructors should always pause before they call on any student for a response after asking a question. Although silence can seem like an eternity, waiting at least 15 seconds after asking a question gives students a chance to think, analyze, and formulate answers. If at all possible, instructors should not answer their own questions. If no one volunteers an answer in a reasonable amount of time instructors may try rephrasing the question or calling on an individual for a response.

As previously discussed, adults have accumulated a variety of life experiences and instruction can become more significant to the student when related to those experiences in some way. It is the instructor's responsibility to find ways to assess student experience in order to use relevant examples that assist in application of the subject matter. Using what the students know in a way that bridges it to new information is a key concept in adult learning theory. Instructors should also be aware of the unique skills brought by each student in order to use their talents at appropriate times to benefit them and the rest of the class. In contrast to much younger learners, adults bring established values, beliefs, and opinions to class with them, allowing for different viewpoints to discussions. Accomplished instructors find ways to maintain respect for each individual's viewpoint while fostering the fact that there will rarely be total agreement among all students. Challenging opinions and viewpoints between students is not only accepted in the classroom but encouraged. However, it must be accomplished within the framework of mutual respect among all participants.[48]

Student involvement in the classroom cannot be separated as a separate event from other adult learning concepts covered in this guide. Implementation of adult learning concepts, by nature, helps foster student involvement. Instructors should take note of individual student participation and use adult learning methods or techniques to engage non-participating students to pull them back into the learning experience. An article by Rocca on student participation in the adult classroom discusses the following points to encourage participation.[49]

- Using problem based learning methods, case studies, and other types of student-centered, as opposed to instructor-centered, events promotes active and engaged participation
- Learning in small groups allows students a greater opportunity to discuss and explore their individual knowledge
- A large class size can have a negative effect as it sometimes hampers communication and allow some students to "hide"
- Seating arrangements can foster or hamper participation depending on the instructional method chosen
- Some students have personal fears of inadequacy in front of others; establishing a comfortable, safe learning environment can aid in calming those fears
- Effective questioning techniques can aid in gaining participation; wait time is essential in order to allow students a chance to participate
- Body language can foster or subdue participation; effective use of eye contact can reengage an idle student

Continuing Professional Responsibilities

Good instructors realize their responsibilities reach *outside* the classroom as well as during the instructional periods. Good instructors also understand the association of these responsibilities with the need to continually seek to improve their instructional abilities, their classroom performance, and the learning outcomes for the students. Instructors have a professional responsibility to continually assess their own performance to look for improvement opportunities, to maintain their subject related knowledge base with current information, and to increase their knowledge with new or advanced material. As a representative of the institution for which they instruct, instructors should always present themselves in a professional manner whether inside or outside the classroom.

Assessments. Instructors have a professional responsibility to their students. Students expect their instructors to come to class fully prepared with not only the appropriate subject content but also with a plan of instruction that includes delivery techniques suitable for adult learners. To help insure those conditions are successfully fostered in the classroom, instructors should use various types of assessments to determine the effectiveness of their methods. Assessments may come by way of staff or peer observations of instructional periods, feedback assessments from the students, and/or self-assessments conducted by instructors on their own performance.

Regardless of the origin of the assessment, instructors can use the information provided to look for areas where improvements can be made to help provide a better learning experience for the students. Instructors should use all available data to assess their performance and look for trends that may point to areas needing improvement. Using of multiple methods of assessment help give a clearer picture of an instructor's performance.

Assessments are used to determine the effectiveness of an instructor's performance inside, and sometimes outside, the classroom. Instructors should analyze any feedback obtained with a critical eye to determine if there are changes that can be made to improve performance. Assessments most often available to the instructor include:

- Self-assessments
- Periodic observations from staff personnel (often a requirement)
- Peer reviews
- Student feedback (often obtained at the end of a course)

Knowledge Base. It goes without saying that instructors should keep a current base of knowledge on the subjects they teach. This includes current general and specific knowledge of the subject to include appropriate terms, policies, procedures, techniques, etc. Instructors that come ill-prepared to the classroom may find themselves embarrassed when a student armed with current subject matter knowledge corrects them on knowledge of which they were unaware. Instruction that includes outdated terms or procedures, old theories, etc. causes lack of student confidence in the instructor, loss of instructor credibility, and can lead to a loss of student interest in the classroom. Instructors should examine their practice on a regular basis to expand their knowledge base, broaden their skills, and incorporate new changes, ideas, facts, terms and all other current subject matter into their instruction.

Instructors seeking to maintain or increase their knowledge in particular subject areas may consider:

- Reading books, publications, magazines articles, and newsletters or watching related videos
- Attending applicable workshops, seminars, or other professional gatherings
- Visiting online internet resources
- Joining online professional groups to discuss related topics
- Obtaining and reading current manuals
- Attending refresher courses
- Taking content related advanced courses

Professional Development. Along with maintaining a current knowledge base of subjects taught, instructors should seek professional development opportunities that maintain and increase other aspects of instruction such as instructional techniques or classroom management. While some professional growth classes or courses may be

mandated, there are other opportunities and avenues available to help instructors continue to grow in their profession. Examples include online courses, web sites and programs, seminars, continuing education classes, and other training opportunities.

Professional development for instructors can constitute a variety of subjects. Of particular importance is the requirement for implementation of adult learning concepts in the classroom. In the shift toward an instructor becoming more of a facilitator rather than a lecturer, there is often room for instructor growth for those instructors ingrained in the lecture-based approach to teaching. Instructors need to be familiar with adult learning concepts, techniques, and methodologies in order to adequately employ them in classroom environments. Training methodologies that are based on discovery learning techniques and geared toward adult learners may be a new concept for some instructors and often is an area where professional development opportunities exist.

When considering professional development opportunities, instructors should:

- Develop personal and professional goals with attention to professional standards
- Implement a plan of professional development opportunities to support attaining the goals
- Actively engage in professional learning opportunities
- Seek feedback in order to improve performance
- Collaborate with other professionals for ideas on instructional methodologies and professional development; this includes appropriate integration of technologies
- Engage in all mandated appropriate professional development requirements

Professionalism. A large part of an instructor's professional responsibilities include always performing in a professional manner through actions, speech, and mannerisms. Embedded within professionalism are valued concepts such as integrity, honesty, trustworthiness, respectfulness, and courteous mannerisms. Instructors should realize that professionalism should not end as they exit the classroom. Not only is it a good practice to remain professional at all times, students that observe unprofessional behavior outside the classroom will have a hard time separating those observations from their learning experience in the classroom. The following is a partial list of considerations for instructors in relation to professional conduct. [50]

- Always maintain a professional relationship with all students
- Maintain proper action and speech mannerisms typical of professional conduct
- Assume responsibility and accountability for performance inside and outside the classroom
- Continually strive to demonstrate proficiency and currency in both subject matter knowledge and teaching skills
- Strive to exercise the highest level of professional judgment
- Refrain from using institutional or professional privileges for personal advantage

- Maintain professional ethics and integrity in all situations
- Endeavor to understand and respect the values and traditions of diverse cultures
- Distinguish between personal opinion and official policies
- Provide accurate, truthful, and complete information at all times
- Respect and enforce the confidentiality of sensitive information

Conclusion

Recent Army publications stipulate that concepts consistent with adult learning are a requirement for classroom instruction. The *Army Learning Concept for 2015* (ALC 2015) (TRADOC Pam 525-8-2, 2011b), now the *Army Learning Model* prescribes a shift in the Army's classroom training model from a "sage-on-the-stage" instructor-centric delivery of learning material to a "guide-on-the-side" model wherein instructors facilitate student-led learning, problem solving, and discussion. The shift in the learning concepts described in ALC 2015 are closely aligned with adult learning theory concepts currently exercised in many schools, businesses, and other professions outside the Army.

Implementation of these concepts is ongoing. The transition may be a challenge for some institutions with curriculum designed for presentation-based instruction and instructors grounded in lecture-based approaches to content delivery. A major factor in facilitating this transition is education of instructor personnel in concepts aligned with adult learning theory.

Policies requiring periodic assessment of instructors remain in effect. However, assessment formats must be aligned to coincide with instructional approaches consistent with Army doctrine and adult learning methodologies. The Academic Instructor Assessment used at the WOCC has been adapted to account for these changes. This document, *The Academic Instructor Assessment Guide*, is the accompanying manual to the AIA for use by WOCC instructors and other interested personnel. Its purpose is to assist instructors in better understanding adult learning concepts and to ultimately enhance instructors' instructional methods and practices in order to facilitate a better learning experience for students.

A key concept that must be embraced by the academic staff, assessment personnel, and the instructors themselves, is that assessments are intended as tools to aid in the instructional process. Assessments need to be viewed as a positive source for feedback on classroom instruction designed to assist the instructor in identifying potential areas for improvement.

While this Guide can assist instructors in better understanding of the competencies in the AIA and methodologies associated with adult learning and classroom instruction, it is not an all inclusive manual for an in-depth study of adult learning concepts. References are cited to provide personnel with sources for a more in-depth study on specific subjects. Instructors interested in greater detail beyond what is provided in this guide are encouraged to use those and other public domain resources.

References

Numerically:

[1] Kutner, M., Sherman, R., Tibbetts, J., Condelli, L. (1997). *Evaluating Professional Development: A Framework for Adult Education,* 1-5. Washington, DC: U.S. Department of Education, Division of Adult Education and Literacy. Retrieved from http://www.calpro-online.org/pubs/evalmon.pdf

[2] Pettifor, L. (2012). Self Evaluation, Learning and Development Center. Retrieved from http://www2.warwick.ac.uk/services/ldc/resource/evaluation/tools/self/

[3] Hemstra, R. (2009). Moving from Pedagogy to Andragogy. (Adapted and Updated from Hiemstra, R., & Sisco, B. (1990). *Individualizing instruction.* San Francisco: Jossey-Bass.) Retrieved from http://www-distance.syr.edu/andraggy.html

[4] Goldstein, N. W. (2012). *Curriculum Guide for Professional Technical College Instructors: The Adult Learner, Course 8*, 8.2-8.4, 8.16-8.22. Shoreline Community College, Seattle, WA. Retrieved from the Careers in Education website http://www.careersined.org/documents/prof-tech/Adult-learner-8.pdf

[5] University of Melbourne (2013). Helping Adults Learn in the Classroom, *Adult Learning.* Melbourne, Australia. Retrieved from http://www.themis.unimelb.edu.au/resources/REF_Adult_Learning.pdf

[6] University of British Columbia (2010). *Choosing the Right Seating Arrangement for Your Meeting or Event*, Room Set-Up Guide, Vancouver, BC. Retrieved from http://robsonsquare.ubc.ca/files/2010/11/Room-Set-Up-Guide.pdf

[7] British Columbia Institute of Technology (2010). *Preparing and using Student Handouts,* 1-3. BCIT Learning and Teaching Centre, British Columbia Institute of Technology, Burnaby, British Columbia, Canada. Retrieved from https://helpdesk.bcit.ca/fsr/teach/teaching/ja_studenthandouts.pdf

[8] University of California (2008). *Creating and Using Support Materials*, Pacific Aids Education and Training Center, University of California, San Francisco, CA. Retrieved from http://familymedicine.medschool.ucsf.edu/paetc/resources/asilomar_2008/creating_support_materials.pdf

[9] University of North Carolina (2006). *Core Standards for All Teachers*, North Carolina State Board of Education, Chapel Hill, NC. Retrieved from http://soe.unc.edu/academics/requirements/standards/NCDPI_Core_Diversity_Technology_Standards.pdf

[10] Ewens, D. (2006). *Health and Safety and Adult Learners in the Learning and Skills Sector*, 19. Learning and Skills Council, Coventry, UK. Retrieved from http://readingroom.lsc.gov.uk/lsc/2006/quality/goodpractice/nat-healthandsafetyandadultlearnersinthelearningandskillssector-gn-apr2006.pdf

[11] League for Innovation in the Community College, (2006). Creating a Community of Learners, *Getting Results*, League for Innovation in the Community College, Chandler AZ. Retrieved from http://www.league.org/gettingresults/web/p/module1.pdf

[12] Shaffer, S. C., (2009) *Creating a Positive Classroom Environment,* Teaching and Learning Resources of Penn State York. Retrieved from http://www.personal.psu.edu/scs15/idweb/positiveclimate.htm

[13] Mendes, E. (2003). What Empathy Can Do, *Educational Leadership*, *Volume 61, Number 1.* Retrieved from http://www.ascd.org/publications/educational-leadership/sept03/vol61/num01/What-Empathy-Can-Do.aspx

[14] Lacefield, R. S. (1999). Adult Education in Practice, Teaching Methods and Course Structure. *Adult Education Tipsheets*. Waycross College, Waycross,GA. Retrieved from http://roberta.tripod.com/adulted/methods.htm

[15] Zemke, R. & Zemke, S. (1995). Adult Learning: What do we know for sure?, *TRAINING Magazine,* June 1995, 41-43. Minneapolis, MN; Lakewood Publications. Retrieved from http://setur.khi.is/fullordinsfraedsla/NoN/Itarefni/Zemke_WhatDoWeKnow.pdf

[16] Castronova, J. A. (2002). Discovery Learning for the 21st Century: What is it and how does it compare to traditional learning in effectiveness in the 21st Century?, *Action Research Exchange, Literature Reviews, Volume 1 No. 1.* Department of Curriculum & Instructional Technology, Valdosta State University, Valdosta, Georgia, Summer 2002. Online at: http://teach.valdosta.edu/are/Litreviews/vol1no1/castronova_litr.pdf

[17] Johnson, B. A. (2010). *The Importance of Communication in Class Discussions*. Education and Schools, Examiner.com. Clarity Digital Group, July 11, 2010. Retrieved from http://www.examiner.com/article/the-importance-of-communication-class-discussions

[18] Woodul, C., (n.d). *Standards of Professional Conduct*, Watson School of Education, University of North Carolina at Wilmington. Retrieved from http://people.uncw.edu/woodulc/Standards%20of%20Professional%20Conduct.htm

[19] Caruso, S. (2010). Malcolm Knowles and the Six Assumptions Underlying Andragogy. Retrieved from http://www.eadulteducation.org/adult-learning/malcolm-knowles-and-the-six-assumptions-underlying-andragogy/

[20] Gokhale, A. A. (1995). Collaborative Learning Enhances Critical Thinking. *Journal of Technology Education, Vol. 7, No. 1, Fall 1995.* Retrieved from http://scholar.lib.vt.edu/ejournals/JTE/v7n1/gokhale.jte-v7n1.html

[21] Wisconsin Center for Educational Research (1997). *What is collaborative Learning?* National Institute for Science Education, School of Education, University of Wisconsin – Madison. Retrieved from http://www.wcer.wisc.edu/archive/cl1/cl/moreinfo/mi2a.htm

[22] Brown, L. & Lara, V. (2007). *Professional Development Module on Collaborative Learning,* Texas Collaborative for Teaching Excellence, Texas Higher Education Coordinating Board, Austin, TX. Retrieved from http://www.texascollaborative.org/Collaborative_Learning_Module.htm

[23] Duron, R., Limbach, B, & Waugh, W. (2006) Critical Thinking Framework For Any Discipline. *International Journal of Teaching and Learning in Higher Education, Volume 17, Number 2,* 160-161. Virginia Tech, VA. Retrieved from http://www.isetl.org/ijtlhe/pdf/ijtlhe55.pdf

[24] Direct Essays, (2009). *Knowle's Andragogy Model.* Retrieved from http://www.directessays.com/viewpaper/201288.html

[25] Ota, C., DiCarlo, C., Burts, D., Laird, R., & Gioe, C. (2006). Training and the Needs of Adult Learners, *Journal of Extension, Volume 44, Number 6.* Retrieved from http://www.joe.org/joe/2006december/tt5.php

[26] Gore, K. (2010). Putting Students in Charge of Finding Real-World Example Makes for a More Engaging Classroom, *Teaching and Learning,* Magna Publications, Madison, WI. Retrieved from http://www.facultyfocus.com/articles/teaching-and-learning/putting-students-in-charge-of-finding-real-world-examples-makes-for-a-more-engaging-classroom/

[27] Darling-Hammond, L. & Austin, K. (2003) Lessons for Life: Learning and Transfer. *The Learning Classroom, Session 11,* 190. Stanford University, School of Education, Stanford, CA. Retrieved from http://www.learner.org/courses/learningclassroom/support/11_learning_transfer.pdf

[28] Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). Learning and transfer, *How people learn: Brain, mind, experience, and school,* 55. Washington, DC: National Academy Press. Retrieved from http://www.csun.edu/~sb4310/How%20People%20Learn.pdf

[29] Armstrong, P. (2013) *Bloom's Taxonomy*, Teaching and Learning. The Center for Teaching, Vanderbilt University. Retrieved from http://cft.vanderbilt.edu/teaching-guides/pedagogical/blooms-taxonomy/

[30] Illinois State University (2012). *Effective Questioning Techniques*, Department of Physics, Illinois State University, Normal, IL. Retrieved from http://www.phy.ilstu.edu/pte/311content/questioning/techniques.html

[31] Indiana University (2011). *Preparing for Discussions,* Teaching Handbook, Center for Innovative Teaching and Learning, Indiana University, Bloomington, IN. Retrieved from http://citl.indiana.edu/resources/teaching-resources1/teaching-handbook-items/discussion.php

[32] Lorena, C. (2010). 7 Ways to Increase Teacher Technology Integration in the Classroom [Web log post]. Retrieved from http://mscheska.wordpress.com/category/technology/iste/

[33] Lin, R. (2012). *How to Integrate Technology into an Adult Basic Education Classroom*. Demand Media, Inc, Retrieved from http://www.ehow.com/how_6185278_integrate-adult-basic-education-classroom.html

[34] Glickman, C. (1991). Pretending not to know what we know. *Educational Leadership, v48 n8*, 6. Association for Supervision and Curriculum Development. Retrieved from http://www.ascd.org/ASCD/pdf/journals/ed_lead/el_199105_glickman.pdf

[35] Keesee, G. (2011). *Instructional Approaches*. Teaching and Learning Resources. Retrieved from PBWorks website: http://teachinglearningresources.pbworks.com/w/page/19919560/Instructional%20Approaches

[36] Abrams-Menko, B., Eugene, D., Powell, Z., Scott, S., Williams, J., & Woods, K. (n.d.) *Choosing Instructional Methods*. Retrieved from http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CC8QFjAA&url=http%3A%2F%2Fbertranne.weebly.com%2Fuploads%2F8%2F6%2F9%2F6%2F869697%2Fpaper.psychology_of_education.group_presentation.doc&ei=lEX4UNyZB4Hq2AXT1oHICg&usg=AFQjCNETjUbaJCPLU0UskCisuNlW1bU8mw

[37] Hrepic, Z. (2011). *Introduction in Nonverbal Communication*. Department of Earth and Space Sciences, Columbus State University, Retrieved from http://www.hrepic.com/Teaching/GenEducation/nonverbcom/nonverbcom.htm

[38] Picket, T. (2010). "Verbal and Nonverbal Classroom Communication." Yahoo Voices news. Retrieved from http://voices.yahoo.com/verbal-nonverbal-classroom-communication-7439004.html?cat=4

[39] Tugend, A. (2011) *The Role of Mistakes in the Classroom*, Alina Tugend (Author, Journalist, New York Times) blog. Retrieved from http://www.edutopia.org/blog/benefits-mistakes-classroom-alina-tugend

[40] Burden, P. R. (2000). Use Mistakes and Redoing Work as Learning Opportunities. *Powerful classroom management strategies* (pp. 85)*: Motivating students to learn.* Thousand Oaks, CA: Corwin Press.

[41] Alexander, B. (2012). Classroom Management Success, Principles and Practice, Classroom Management Success website: http://www.classroom-management-success.org/time-management-in-the-classroom.html

[42] McLeod, J., Fisher, J., & Hoover, G. (2003). *The Key Elements of Classroom Management*, Association for Supervision and Curriculum Development (ASCD) Danvers, MA. Retrieved from http://www.ascd.org/publications/books/103008/chapters/Managing-Instructional-Time.aspx

[43] Garrison, C., & Ehringhaus, M. (2007). Formative and Summative Assessments in the Classroom. Retrieved from http://www.amle.org/Publications/WebExclusive/Assessment/tabid/1120/Default.aspx

[44] Cherem, B. F. (2011), Using Online Formative Assessments for Improved Learning, *Currents in Teaching and Learning*, 42-43. Worcester State University, Worcester, Massachusetts, U.S.A. Retrieved from http://www.worcester.edu/Currents/Archives/Volume_3_Number_2/CURRENTSV3N2CheremP42.pdf

[45] Tangient LLC (2012). The Importance of Pre-Assessments and Formative Assessments, Totally Tremendous Teachers website. Retrieved from http://totallytremendousteachers.wikispaces.com/The+Importance+of+Pre-Assessment+and+Formative+Assessment

[46] Indiana University (2011). *Sample Classroom Assessment Techniques,* Teaching Resources, Center for Innovative Teaching and Learning, Indiana University, Bloomington, IN. Retrieved from http://citl.indiana.edu/resources/teaching-resources1/sampleCATs.php

[47] Oberg, C (2010). Guiding Classroom Instruction through Performance Assessment, *Journal of Case Studies in Accreditation and Assessment*. 1. Retrieved from the Academic and Business research Institute website http://www.aabri.com/manuscripts/09257.pdf

[48] Keller, J. J. (2012). Engaging the Adult Learner, *Training on Demand*, J. J. Keller & Associates, Inc. Retrieved from the Training on Demand website https://www.jjkellertraining.com/TrainingResources/1809/OSHA

[49] Rocca, K. (2010). Student Participation in the College Classroom: An Extended Multidisciplinary Literature Review, *Communication Education, Volume 59, Number 2, April 2010*, 185-213, National Communication Association, Washington, DC. Retrieved from http://www.csus.edu/indiv/s/stonerm/Rocca-LitRevEngagingStudents.pdf

[50] Association of American Educators. (2012). *Code of Ethics for Educators*, Association of American Educators, Mission Viejo, CA. Retrieved from http://www.aaeteachers.org/index.php/about-us/aae-code-of-ethics

References

Alphabetically:

[36] Abrams-Menko, B., Eugene, D., Powell, Z., Scott, S., Williams, J., & Woods, K. (n.d.) *Choosing Instructional Methods.* Retrieved from http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CC8QFjAA&url=http%3A%2F%2Fbertranne.weebly.com%2Fuploads%2F8%2F6%2F9%2F6%2F869697%2Fpaper.psychology_of_education.group_presentation.doc&ei=lEX4UNyZB4Hq2AXT1oHICg&usg=AFQjCNETjUbaJCPLU0UskCisuNlW1bU8mw

[41] Alexander, B. (2012). Classroom Management Success, Principles and Practice, Classroom Management Success website: http://www.classroom-management-success.org/time-management-in-the-classroom.html

[29] Armstrong, P. (2013) *Bloom's Taxonomy*, Teaching and Learning. The Center for Teaching, Vanderbilt University. Retrieved from http://cft.vanderbilt.edu/teaching-guides/pedagogical/blooms-taxonomy/

[50] Association of American Educators. (2012). *Code of Ethics for Educators*, Association of American Educators, Mission Viejo, CA. Retrieved from http://www.aaeteachers.org/index.php/about-us/aae-code-of-ethics

[28] Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). Learning and transfer, *How people learn: Brain, mind, experience, and school*, 55. Washington, DC: National Academy Press. Retrieved from http://www.csun.edu/~sb4310/How%20People%20Learn.pdf

[7] British Columbia Institute of Technology (2010). *Preparing and using Student Handouts,* 1-3. BCIT Learning and Teaching Centre, British Columbia Institute of Technology, Burnaby, British Columbia, Canada. Retrieved from https://helpdesk.bcit.ca/fsr/teach/teaching/ja_studenthandouts.pdf

[22] Brown, L. & Lara, V. (2007). *Professional Development Module on Collaborative Learning*, Texas Collaborative for Teaching Excellence, Texas Higher Education Coordinating Board, Austin, TX. Retrieved from http://www.texascollaborative.org/Collaborative_Learning_Module.htm

[40] Burden, P. R. (2000). Use Mistakes and Redoing Work as Learning Opportunities. *Powerful classroom management strategies* (pp. 85)*: Motivating students to learn.* Thousand Oaks, CA: Corwin Press.

[19] Caruso, S. (2010). Malcolm Knowles and the Six Assumptions Underlying Andragogy. Retrieved from http://www.eadulteducation.org/adult-learning/malcolm-knowles-and-the-six-assumptions-underlying-andragogy/

[16] Castronova, J. A. (2002). Discovery Learning for the 21st Century: What is it and how does it compare to traditional learning in effectiveness in the 21st Century?, *Action Research Exchange, Literature Reviews, Volume 1 No. 1.* Department of Curriculum & Instructional Technology, Valdosta State University, Valdosta, Georgia, Summer 2002. Online at: http://teach.valdosta.edu/are/Litreviews/vol1no1/castronova_litr.pdf

[44] Cherem, B. F. (2011), Using Online Formative Assessments for Improved Learning, *Currents in Teaching and Learning*, 42-43. Worcester State University, Worcester, Massachusetts, U.S.A. Retrieved from http://www.worcester.edu/Currents/Archives/Volume_3_Number_2/CURRENTSV3N2CheremP42.pdf

[27] Darling-Hammond, L. & Austin, K. (2003) Lessons for Life: Learning and Transfer. *The Learning Classroom, Session 11,* 190. Stanford University, School of Education, Stanford, CA. Retrieved from http://www.learner.org/courses/learningclassroom/support/11_learning_transfer.pdf

[24] Direct Essays, (2009). *Knowle's Andragogy Model*. Retrieved from http://www.directessays.com/viewpaper/201288.html

[23] Duron, R., Limbach, B, & Waugh, W. (2006) Critical Thinking Framework For Any Discipline. *International Journal of Teaching and Learning in Higher Education, Volume 17, Number 2,* 160-161. Virginia Tech, VA. Retrieved from http://www.isetl.org/ijtlhe/pdf/ijtlhe55.pdf

[10] Ewens, D. (2006). *Health and Safety and Adult Learners in the Learning and Skills Sector*, 19. Learning and Skills Council, Coventry, UK. Retrieved from http://readingroom.lsc.gov.uk/lsc/2006/quality/goodpractice/nat-healthandsafetyandadultlearnersinthelearningandskillssector-gn-apr2006.pdf

[43] Garrison, C., & Ehringhaus, M. (2007). Formative and Summative Assessments in the Classroom. Retrieved from http://www.amle.org/Publications/WebExclusive/Assessment/tabid/1120/Default.aspx

[34] Glickman, C. (1991). Pretending not to know what we know. *Educational Leadership, v48 n8*, 6. Association for Supervision and Curriculum Development. Retrieved from http://www.ascd.org/ASCD/pdf/journals/ed_lead/el_199105_glickman.pdf

[20] Gokhale, A. A. (1995). Collaborative Learning Enhances Critical Thinking. *Journal of Technology Education, Vol. 7, No. 1, Fall 1995*. Retrieved from http://scholar.lib.vt.edu/ejournals/JTE/v7n1/gokhale.jte-v7n1.html

[4] Goldstein, N. W. (2012). *Curriculum Guide for Professional Technical College Instructors: The Adult Learner, Course 8*, 8.2-8.4, 8.16-8.22. Shoreline Community College, Seattle, WA. Retrieved from the Careers in Education website http://www.careersined.org/documents/prof-tech/Adult-learner-8.pdf

[26] Gore, K. (2010). Putting Students in Charge of Finding Real-World Example Makes for a More Engaging Classroom, *Teaching and Learning*, Magna Publications, Madison, WI. Retrieved from http://www.facultyfocus.com/articles/teaching-and-learning/putting-students-in-charge-of-finding-real-world-examples-makes-for-a-more-engaging-classroom/

[3] Hemstra, R. (2009). Moving from Pedagogy to Andragogy. (Adapted and Updated from Hiemstra, R., & Sisco, B. (1990). *Individualizing instruction*. San Francisco: Jossey-Bass.) Retrieved from http://www-distance.syr.edu/andraggy.html

[37] Hrepic, Z. (2011). *Introduction in Nonverbal Communication*. Department of Earth and Space Sciences, Columbus State University, Retrieved from http://www.hrepic.com/Teaching/GenEducation/nonverbcom/nonverbcom.htm

[30] Illinois State University (2012). *Effective Questioning Techniques*, Department of Physics, Illinois State University, Normal, IL. Retrieved from http://www.phy.ilstu.edu/pte/311content/questioning/techniques.html

[31] Indiana University (2011). *Preparing for Discussions,* Teaching Handbook, Center for Innovative Teaching and Learning, Indiana University, Bloomington, IN. Retrieved from http://citl.indiana.edu/resources/teaching-resources1/teaching-handbook-items/discussion.php

[46] Indiana University (2011). *Sample Classroom Assessment Techniques,* Teaching Resources, Center for Innovative Teaching and Learning, Indiana University, Bloomington, IN. Retrieved from http://citl.indiana.edu/resources/teaching-resources1/sampleCATs.php

[17] Johnson, B. A. (2010). *The Importance of Communication in Class Discussions*. Education and Schools, Examiner.com. Clarity Digital Group, July 11, 2010. Retrieved from http://www.examiner.com/article/the-importance-of-communication-class-discussions

[35] Keesee, G. (2011). *Instructional Approaches*. Teaching and Learning Resources. Retrieved from PBWorks website: http://teachinglearningresources.pbworks.com/w/page/19919560/Instructional%20Approaches

[48] Keller, J. J. (2012). Engaging the Adult Learner, *Training on Demand*, J. J. Keller & Associates, Inc. Retrieved from the Training on Demand website https://www.jjkellertraining.com/TrainingResources/1809/OSHA

[1] Kutner, M., Sherman, R., Tibbetts, J., Condelli, L. (1997). *Evaluating Professional Development: A Framework for Adult Education,* 1-5. Washington, DC: U.S. Department of Education, Division of Adult Education and Literacy. Retrieved from http://www.calpro-online.org/pubs/evalmon.pdf

[14] Lacefield, R. S. (1999). Adult Education in Practice, Teaching Methods and Course Structure. *Adult Education Tipsheets.* Waycross College, Waycross,GA. Retrieved from http://roberta.tripod.com/adulted/methods.htm

[11] League for Innovation in the Community College, (2006). Creating a Community of Learners, *Getting Results*, League for Innovation in the Community College, Chandler AZ. Retrieved from http://www.league.org/gettingresults/web/p/module1.pdf

[33] Lin, R. (2012). *How to Integrate Technology into an Adult Basic Education Classroom.* Demand Media, Inc, Retrieved from http://www.ehow.com/how_6185278_integrate-adult-basic-education-classroom.html

[32] Lorena, C. (2010). 7 Ways to Increase Teacher Technology Integration in the Classroom [Web log post]. Retrieved from http://mscheska.wordpress.com/category/technology/iste/

[42] McLeod, J., Fisher, J., & Hoover, G. (2003). *The Key Elements of Classroom Management*, Association for Supervision and Curriculum Development (ASCD) Danvers, MA. Retrieved from http://www.ascd.org/publications/books/103008/chapters/Managing-Instructional-Time.aspx

[13] Mendes, E. (2003). What Empathy Can Do, *Educational Leadership*, *Volume 61, Number 1.* Retrieved from http://www.ascd.org/publications/educational-leadership/sept03/vol61/num01/What-Empathy-Can-Do.aspx

[47] Oberg, C (2010). Guiding Classroom Instruction through Performance Assessment, *Journal of Case Studies in Accreditation and Assessment.* 1. Retrieved from the Academic and Business research Institute website http://www.aabri.com/manuscripts/09257.pdf

[25] Ota, C., DiCarlo, C., Burts, D., Laird, R., & Gioe, C. (2006). Training and the Needs of Adult Learners, *Journal of Extension*, *Volume 44, Number 6.* Retrieved from http://www.joe.org/joe/2006december/tt5.php

[2] Pettifor, L. (2012). Self Evaluation, Learning and Development Center. Retrieved from http://www2.warwick.ac.uk/services/ldc/resource/evaluation/tools/self/

[38] Picket, T. (2010). "Verbal and Nonverbal Classroom Communication." Yahoo Voices news. Retrieved from http://voices.yahoo.com/verbal-nonverbal-classroom-communication-7439004.html?cat=4

[49] Rocca, K. (2010). Student Participation in the College Classroom: An Extended Multidisciplinary Literature Review, *Communication Education, Volume 59, Number 2, April 2010*, 185-213, National Communication Association, Washington, DC. Retrieved from http://www.csus.edu/indiv/s/stonerm/Rocca-LitRevEngagingStudents.pdf

[12] Shaffer, S. C., (2009) *Creating a Positive Classroom Environment,* Teaching and Learning Resources of Penn State York. Retrieved from http://www.personal.psu.edu/scs15/idweb/positiveclimate.htm

[45] Tangient LLC (2012). The Importance of Pre-Assessments and Formative Assessments, Totally Tremendous Teachers website. Retrieved from http://totallytremendousteachers.wikispaces.com/The+Importance+of+Pre-Assessment+and+Formative+Assessment

[39] Tugend, A. (2011) *The Role of Mistakes in the Classroom*, Alina Tugend (Author, Journalist, New York Times) blog. Retrieved from http://www.edutopia.org/blog/benefits-mistakes-classroom-alina-tugend

[6] University of British Columbia (2010). *Choosing the Right Seating Arrangement for Your Meeting or Event*, Room Set-Up Guide, Vancouver, BC. Retrieved from http://robsonsquare.ubc.ca/files/2010/11/Room-Set-Up-Guide.pdf

[8] University of California (2008). *Creating and Using Support Materials*, Pacific Aids Education and Training Center, University of California, San Francisco, CA. Retrieved from http://familymedicine.medschool.ucsf.edu/paetc/resources/asilomar_2008/creating_support_materials.pdf

[5] University of Melbourne (2013). Helping Adults Learn in the Classroom, *Adult Learning*. Melbourne, Australia. Retrieved from http://www.themis.unimelb.edu.au/resources/REF_Adult_Learning.pdf

[9] University of North Carolina (2006). *Core Standards for All Teachers*, North Carolina State Board of Education, Chapel Hill, NC. Retrieved from http://soe.unc.edu/academics/requirements/standards/NCDPI_Core_Diversity_Technology_Standards.pdf

[21] Wisconsin Center for Educational Research (1997). *What is collaborative Learning?* National Institute for Science Education, School of Education, University of Wisconsin – Madison. Retrieved from http://www.wcer.wisc.edu/archive/cl1/cl/moreinfo/mi2a.htm

[18], Woodul, C., (n.d). *Standards of Professional Conduct*, Watson School of Education, University of North Carolina at Wilmington*.* Retrieved from http://people.uncw.edu/woodulc/Standards%20of%20Professional%20Conduct.htm

[15] Zemke, R. & Zemke, S. (1995). Adult Learning: What do we know for sure?, *TRAINING Magazine,* June 1995, 41-43. Minneapolis, MN; Lakewood Publications. Retrieved from http://setur.khi.is/fullordinsfraedsla/NoN/Itarefni/Zemke_WhatDoWeKnow.pdf

Appendix H

Academic Instructor Assessment

Academic Instructor Assessment Form Instructions

This Academic Instructor Assessment (AIA) is a tool designed for academic staff members or other designated personnel to use when assessing instructors who are facilitating discussion, conducting training, or delivering instruction. It may also be used by instructors for conducting a self-assessment to determine ways to enhance their personal performance in the classroom. In this document, the term "instructor" refers to an all inclusive role of instructor/ facilitator rather than the more narrowly defined role of presenter/ lecturer.

The form is designed as a tool to help identify instructor strengths, and/or areas that need improvement regarding Army doctrine for classroom instructional practices. These areas were identified to increase knowledge, skills, and ultimately benefit the learning experience of students. The form is not simply a classroom visit checklist. It is intended to be a tool to be used frequently throughout the year by the staff, senior instructors, and the instructor him/herself for assessment and professional self- development. As with any tool of this type, multiple observations tend to give a more accurate assessment of the overall effectiveness of a particular instructor. Multiple assessments that span all different aspects of instruction (e.g. introduction of new material, practical exercises, and student evaluations) are required to obtain an overall picture of an individual instructor's behavior. The AIA tool is intended to be useful to instructors to assess their own performance and to prioritize goals for ongoing professional development.

The assessment form is divided into six sections. The first four sections contain competencies that cover all aspects of an instructor's performance during a particular block of instruction. Section 5 is to be used only by those who have prior knowledge of an instructor's overall behavior or by the instructor during a self-assessment. At the end of each section, space is provided to record additional written comments. The final sixth section at the end of the form allows users to include any overall comments not specific to a particular instructional domain.

Each competency listed in sections 1 through 5 is accompanied by one or more statements describing direct or indirect observable behaviors that are evidence of that particular competency. They are examples, and **therefore are not the only behaviors we would like you to consider when evaluating competencies. Likewise, instructors do not need to exhibit all of the competency examples in order to be rated highly**. Following those statements are four columns that describe, in general terms, the behavior observed by the rater. Each column is accompanied by an associated numerical rating at the top. Once the rater selects a rating for a particular competency, he/she places the appropriate number (1, 2, 3, or 4) in the last column. The rater may also place a rating of "NA" stating that competency was "Not Assessed" including those that were "not applicable" or those that were not observed. A rating of "1" for any competency requires an explanatory comment in the comment blocks below each section further describing deficiencies or short comings and suggestions for improvement. Explanatory comments may also be written for any competency regardless of the rating. A rating of "1" is considered unacceptable. A rating of "2" is minimally acceptable, a rating of "3" is a good performer, and a rating of "4" is considered truly exceptional. Most good performers will receive a "3" rating and this rating should be considered a good score. "4" ratings should be used rarely except when truly deserved.

To use this form assessors should:

13. Identify the type of assessment being conducted and fill out the required administrative information at the top of the form.
14. Review each of the sections and accompanying competencies.
15. For clarification on each competency, refer to the Evidence of Competency statements that give examples of observable behaviors.
16. For each competency, review the rating descriptions and rate each with a 1, 2, 3, 4, or NA by writing the rating into the last column.
17. In the comment blocks below each section, identify a competency by section and letter (e.g. "3.c") for which the rater wishes to provide further clarification. Describe particular strengths or areas where improvements are needed for that particular competency. A rating of "1" in any of the competencies listed in sections 1 through 5 requires a comment. Other comments are optional including competencies with higher ratings or those labeled "NA".
18. Comply with all rules and regulations regarding privacy and confidentiality, and handle the completed assessment accordingly.

ACADEMIC INSTRUCTOR ASSESSMENT

1. Planning and Preparation for Learning

#	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Setup/ Classroom Preparation	• Set up classroom prior to class. • Set up classroom for maximum efficiency to facilitate instruction, to include arranging room correctly and ensuring training aids were available.	Failed several aspects of classroom setup	Prepared classroom, but not in a very timely or efficient manner	Setup classroom timely and efficiently	Conducted exceptional classroom setup and preparation	
b.	Handouts and Other Materials	• Designed supplemental materials with up-to-date information. • Ensured supplemental materials included relevant information, applicable to the instruction presented. • Prepared supplemental materials to aid instruction.	Used non-applicable, non-relevant, outdated, and/or inappropriate supplemental materials	Used somewhat applicable, relevant, current, and appropriate supplemental materials	Used applicable, relevant, current, and appropriate supplemental materials	Exceptionally used handouts or other supplemental materials to enhance learning	
c.	Knowledge of Content	• Displayed in depth knowledge of course content. • Displayed current knowledge of any changes to subject content. • Mentally retrieved information quickly. • Used up-to-date terminology for each specific subject area.	Demonstrated knowledge gaps; used outdated terminology or content	Used some outdated or not easily recalled information	Demonstrated current knowledge of content	Demonstrated extremely thorough, in depth knowledge of content	

Competency #	Section 1 Comments

2. Classroom Environment

#	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Safety Standards	• Conducted training within safety, comfort, and hygiene standards.	Did not adhere to safety standards	Adhered to most standards but not completely	Met all safety standards	Took exceptional steps to ensure safety	
b.	Overall Environment	• Created a positive, supportive, encouraging environment. • Created a classroom environment that facilitated learning for the target audience. • Displayed excitement and motivation toward instruction and content material.	Created an unexciting, mundane, or non-supportive classroom environment	Created a fairly positive learning environment	Created a positive learning environment	Created an extremely positive, encouraging and exciting learning environment	

2. Classroom Environment (cont'd)

#		Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
c.		Respect and Rapport	• Established a fair and respectful learning environment. • Created a classroom climate where students were comfortable in sharing ideas. • Ensured respect between instructor and students and among students themselves.	Did not maintain respect and rapport in the classroom	Maintained respect and rapport throughout the classroom most of the time	Maintained respect and rapport throughout the classroom	Established an atmosphere where respect and rapport was strongly encouraged and consistently maintained by all	
d.		Motivation	• Motivated students while presenting information. • Motivated students to become engaged in active learning by using appropriate instructional methods with relevant content. • Motivated students for subsequent instructional periods via innovative techniques.	Made little or no attempt to motivate students; many or most students appeared unmotivated	Made some attempts to motivate students; most students appeared motivated	Attempted to motivate students not self-motivated; students appeared well motivated	Effectively maintained high levels of motivation in all students	
e.		Discovery Learning Principles	• Implemented techniques and methods that allowed the students to discover learning objectives through exploration (discovery learning). • Ensured learning objectives were accomplished through techniques designed to allow students to derive answers among themselves as opposed to being delivered through a lecture based approach. • Established a spirit of collaborative learning among students. • Shifted responsibility for learning from the instructor to the students; became a facilitator rather than a lecturer.	Haphazardly or inappropriately applied discovery learning techniques, or techniques not attempted at all	Attempted or used some discovery learning techniques to various degrees with moderate success	Applied discovery learning techniques successfully	Displayed exceptional knowledge and thoroughly used discovery learning principles and techniques	
f.		Communication	• Fostered content-related communication and collaboration among the students.	Fostered little or no communication or collaboration among students	Fostered some student communication and/or collaboration	Fostered communication and collaboration among students	Fostered exceptional communication and collaboration consistently	
g.		Classroom Conduct	• Conducted and maintained all instruction and activities in an appropriate, professional manner. • Maintained appropriate and mature verbal and nonverbal mannerisms. • Avoided distracters such as class interruptions from cell phones.	Frequently allowed inappropriate classroom conduct	Occasionally allowed inappropriate classroom conduct	Enforced appropriate classroom conduct	Consistently maintained exceptional classroom conduct	

Competency #	Section 2 Comments

Competency #	Section 2 Comments (continued)

3. Delivery of Instruction

#	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Collaborative Learning	• Implemented student-centered instructional activities that allowed for learning to occur among students. • Implemented demonstrations or problem-solving practical exercises that allowed students to discuss solutions and determine answers through exploration and discovery. • Designed student groups to allow for collaborative work.	Used little, poor, or no collaborative learning or student-centered instructional activities	Used some collaborative learning techniques; techniques could be implemented more effectively	Effectively used collaborative learning techniques	Exceptionally used innovative collaborative learning techniques	
b.	Critical Thinking, Problem Solving	• Facilitated opportunities for students to use critical thinking skills by use of select instructional methods and activities. • Placed students in situations to challenge their conceptions, create contradictions, and promote problem solving skills.	Did not foster or create opportunities for students to use critical thinking or problem solving skills	Occasionally fostered critical thinking and problem solving skills	Effectively included opportunities that fostered critical thinking and problem solving skills	Exceptionally provided innovative activities that used critical thinking and problem solving skills to improve the course	
c.	Job Application Relationship	• Demonstrated application, relevancy, and relationship of lesson content to students' jobs or work environments. • Presented practical exercises and discussions in context of job related events and real world situations.	Demonstrated little or no relationship between the lesson content and the job or real world situations	Occasionally or mildly linked lesson content to job or real world situations	Linked the application of lesson content to job or real world situations	Clearly linked lesson content to show effective application to job and real world situations	
d.	Knowledge Transfer	• Implemented practical exercises (PEs) that promoted the transfer of a student's current and new knowledge to new situations.	Did not use Pes to promote the transfer of knowledge to new situations	Used Pes to some extent to promote the transfer of knowledge with limited success	Used Pes to promote the transfer of knowledge to new situations	Exceptionally used innovative Pes to promote the transfer of knowledge	
e.	Questioning Techniques	• Asked thoughtful, open-ended questions that encouraged critical thinking. • Asked follow-up questions for elaboration and clarification after a student's initial response. • Turned questions back to the students rather than giving a direct answer. • Required students to explain why they believed their particular answer. • Allowed time after asking a question for students to reflect, think, and respond.	Did not use effective questioning techniques, allow ample reflection time for responses, and/or ask follow-up questions	Used some questioning techniques, with limited success; asked questions with simple answers rather than questions that required critical thinking	Used effective questioning techniques	Exceptionally and consistently used effective questioning techniques throughout the instruction	

3. Delivery of Instruction (cont'd)

#	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
f.	Discussions	• Allowed students freedom to discover knowledge while effectively steering the focus of discussions toward course objectives when discussions got off-track. • Encouraged discussions of differing opinions and alternate solutions. • Effectively introduced overlooked data, different perspectives, and learning points into discussions when necessary. • Effectively encouraged student discussions and opinions without allowing one student to dominate.	Failed to provoke meaningful discussions; did not monitor and guide discussions in order to maintain a focus on course objectives	Used moderately effective discussion techniques; discussion not always encouraged or refocused when appropriate	Used effective discussion techniques	Consistently used effective discussion techniques to encourage meaningful student discussions; effectively refocused discussions when necessary	
g.	Use of Technology	• Implemented technology into the classroom to enhance student learning. • Demonstrated appropriate knowledge of technical equipment and software that was incorporated into classroom events. • Innovatively used technology to appropriate degrees to enhance the learning experience. • Used technology seamlessly without detracting from the learning environment.	Used little, poor, or no technology	Used some technology with limited success; applied technology ineffectively or inappropriately	Appropriately integrated technology	Used applicable technology productively, innovatively, and effectively to enhance instruction	
h.	Instructional Methods	• Adapted instructional strategies using a variety of concepts and instructional techniques suitable for adult learners. • Delivered the course content using a variety of instructional methods suited for the course content. • Adopted broad use of facilitation methods for content delivery as opposed to lecture based instruction (when applicable).	Poorly used facilitation or other instructional methods suitable for adult learners; made wide use of lecture based instruction	Used instructional strategies that included some variety of methods with moderate success	Effectively used various instructional methods suitable for adult learners	Exceptionally used adult learning theory instructional methods, concepts and techniques	
i.	Verbal / Nonverbal Communication	• Used appropriate verbal and nonverbal communication techniques that encouraged students to engage in the learning process. • Avoided inappropriate or distracting verbal and nonverbal mannerisms.	Used distracting verbal and/or nonverbal mannerisms regularly that hindered learning	Occasionally used distracting verbal and/or nonverbal mannerisms	Used verbal and nonverbal communication techniques appropriately	Consistently used effective and positive verbal and nonverbal mannerisms	
j.	Tailored Learning	• Adapted lesson presentation to account for students' prior knowledge and experiences	Made little or no adaptation for students' prior knowledge	Made moderate adaptation for students' prior knowledge	Adapted instruction to account for students' prior knowledge	Made exceptional efforts to the lesson presentation to account for students' prior knowledge	

3. Delivery of Instruction (cont'd)

#	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
k.	Student Mistakes	• Used methods, such as discussions, to examine appropriate solutions rather than directly correcting wrong answers. • Effectively used student mistakes as a positive learning tool.	Made improper, poor or no response to student mistakes; students were not aided in learning from mistakes	Made limited use of student mistakes as a learning opportunity	Effectively used student mistakes; helped students identify and learn from mistakes	Exceptionally used student mistakes in a positive, respectful manner to enhance learning	
l.	Time Management	• Structured the instruction of course content to meet course objectives within the allotted time. • Allotted appropriate time for each instructional method used (e.g. giving too much or too little time to conduct a practical exercise or for discussions on a particular topic).	Did not plan the lesson efficiently; poorly executed lesson in the time allotted	Planned and executed lesson with some components allotted too much or too little time	Used time allotted for each portion of the lesson appropriately	Exceptionally used time allotted to efficiently and productively deliver the course content	

Competency #	Section 3 Comments

4. Assessment and Monitoring

#	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Pre-Assessment of Student Knowledge	• Formally or informally assessed students' skills as a baseline to assist in tailored learning. • Inquired about students' understanding and experiences prior to instruction.	Conducted little, ineffective, or no pre-assessment	Made some attempt to assess student knowledge	Conducted pre-assessment of student knowledge	Conducted a thorough and effective pre-assessment of student knowledge	
b.	Student Comprehension	• Formally or informally measured students' progress and comprehension using assessments to determine material learned and to shape future instruction. • Employed a variety of methods to check student understanding and learning. • Gave appropriate, prompt, and specific feedback to students in order to reinforce learning or correct misunderstandings.	Conducted little, ineffective, or no assessment to check student comprehension	Made some attempts to assess student comprehension with limited success	Used effective techniques to assess student comprehension	Consistently used assessments to effectively check student comprehension and used results to shape future instruction	
c.	Student Involvement	• Monitored student involvement to ensure all students were actively engaged in the learning process (e.g. noting students' non participation and attempting to involve them in a discussion or questioning their understanding).	Conducted little or no monitoring of student engagement or activity	Casually monitored student involvement; limited attempts to involve reluctant students	Monitored student involvement and attempted to engage all students	Consistently monitored students involvement and actively engaged all students	

Competency #	Section 4 Comments

5. Continuing Professional Responsibilities – (Prior Knowledge or Self Assessment only)

#	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
a.	Assessments	• Actively seeks feedback from peers and staff and uses feedback to enhance performance. • Conducts periodic self-assessments to help identify areas needing improvement. • Uses end-of-course student assessments/feedback to enhance performance. • Proactively uses areas identified in self, student, and staff assessments to improve performance.	Does not use assessments to effectively improve performance	Uses assessments moderately; seeks feedback at times; feedback not always used constructively	Uses feedback and assessments	Consistently uses feedback effectively and performs self assessments to increase performance	

5. Continuing Professional Responsibilities – (cont'd)

#	Competency	Evidence of Competency	1 Needs Major Improvement	2 Minor Issues	3 Well Done	4 Exceptional	Rating (1,2,3,4 or NA)
b.	Knowledge Base	• Actively seeks to maintain knowledge base of subject areas included in course content. • Ensures changes are incorporated into course material and instruction.	Makes little or no attempt to incorporate new material or update knowledge base	Usually incorporates changes to material; generally maintains knowledge base	Maintains adequate knowledge base and incorporates it into classroom instruction	Constantly seeks new information and updates to integrate into course material; aggressively seeks to maintain knowledge base	
c.	Professional Development	• Assesses needs for professional growth and participates in professional growth activities. • Incorporates new skills and knowledge gained through professional development to enhance the quality of instruction.	Pays little or no attention to professional development	Attempts professional development at times, with varying degree of success	Seeks opportunities to gain and apply knowledge and skills through professional development	Actively seeks and participates in professional development opportunities	
d.	Professionalism	• Presents himself/herself in a professional manner through actions, speech, mannerisms, and all interactions within the classroom. • Displays sound judgment, respects confidentiality, and conducts all actions ethically and honestly.	Displays several significant departures from professional conduct	Occasionally displays some minor departures from professional conduct	Maintains professional mannerisms	Consistently displays highly professional conduct in all aspects of instructor duties inside and outside the classroom	

Competency #	Section 5 Comments

Section 6. Overall Comments